OCT 9 1919

Registered at the G.P.O., Sydney, for Transmission by Post as a Newspaper. Published Weekly.

THE

MEDICAL JOURNAL OF AUSTRALIA

(With which "The Australasian Medical Gazette," and "The Australian Medical Journal" are incorporated.)

The Journal of the Australian Branches of the British Medical Association

VOL. II.—6TH YEAR—No. 9. SYDNEY: SATURDAY, AUGUST 30, 1919. PRICE 6D.

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VOL. II.—6TH YEAR. SYDNEY: SATURDAY, AUGUST 30, 1919. No. 9.

INTRODUCTION TO A DISCUSSION ON PNEUMONIC INFLUENZA.[1]

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In attempting to open a general discussion on influenza, it is impossible to confine the scope to a single aspect of the problem and at the same time equally impossible to traverse the whole of what is an extraordinarily wide field. The gravity of the present pandemic, which we know locally as pneumonic influenza and which goes elsewhere by various names is, however, of such moment that no apology is needed for attempting to provoke discussion, even if the effort is imperfect and disjointed.

First, then, it may be suggested that the nomenclature of the affection requires immediate amendment. The term influenza is derived from an Italian epidemic in the 17th century which was attributed to some malign influence of the stars. It now covers three groups of disorder: (*i.*) the common cold due to organisms other than the *B. influenzæ*, (*ii.*), catarrhal fever with a variety of symptoms; the disease generally attributed to the *B. pfeiffer.*, (*iii.*) pandemics occurring at long intervals, such as the one with which we are at present faced. The second and third have two characteristics in common, *viz*:—(1) suddenness of onset; (2) the number of persons attacked. It would certainly seem that the time has arrived to abolish the term influenza altogether. If a name must be given to the present pandemic catarrhal septicaemia would appear to be a better description of those distinctive cases associated with hæmorrhagic and cyanotic development.

But the old nomenclature still prevails and it is necessary to ask, is this pandemic disease influenza?

The answer must be No, not as influenza has been known hitherto, for the reasons:—

(1) That the *B. pfeiffer.* is frequently not demonstrated.

This point is disputed and referred to defects of technique, but a careful study of the literature makes it impossible to believe that so many expert bacteriologists should give different findings merely on defective technique.

(2) The mortality is much higher than in the affection attributed to *B. pfeiffer.*.
(3) The victims of what we have always called influenza or catarrhal fever have been mostly old people. Here the victims have been largely young adults.
(4) There is often a notable absence of the classical naso-pharyngeal catarrhal signs in many cases, even the most severe.

Is the disease pneumonia? Again the answer must be No, not as pneumonia has been hitherto regarded, for the reasons:—

(1) The disease does not confine itself to distinct areas of lung tissue;
(2) The patients who come to autopsy, do not show in general the changes known as red and white hepatization, but often appear to have died with an intense congestive condition;
(3) These congestive and hæmorrhagic conditions show little or no tendency to resolve;
(4) The clinical picture is not that of pneumonia in the absence of marked dyspnœa with dilated *àlæ nasi*, anxiety of facies, etc; and the fact that the patient prefers to lie prostrate throughout the illness is quite unlike pneumonia.
(5) "Rusty" sputum is not common but actually hæmorrhagic sputum is comparatively frequent.
(6) There is an absence of right heart dilatation even in fatal cases, a feature noted all over the world.

Obviously then the term pneumonic influenza is only of value as indicating the disease. If it is used as explaining the pathology, or course of the affection, we are only remaining in ignorance, French and his co-workers have suggested "Influenza streptococcopneumonia," and probably "pneumonitis" would be better than pneumonia.

Is it a new disease? Again the answer must be No, for if anyone cares to look through the accounts of former pandemics, he will find every symptom that has been recorded in the present outbreak. The quaint phrase of one writer struck me, "that it proved particularly fatal to teeming women" and this has been a feature of our own experience. The old physicians were quite alive to the extraordinary diversity and complexity of symptoms both pulmonary, abdominal, cerebral and hæmorrhagic.

My own experience of the present epidemic is as follows:—In the end of November of last year there were three in hospital which presented very unusual features. One was a young man stated to have been suffering for some days from influenza. He had taken a generous hand in the armistice celebrations of November 11, and his condition resembled a *delirium tremens*. There was marked cerebral confusion with periods of excitement and tremor. Then the picture became much more that of some meningeal involvement and he appeared certain to die, but after a long illness he recovered perfectly. The course of the affection was practically afebrile. The second patient had very marked abdominal distension with high fever and pulmonary signs, so that the diagnosis halted for a day or two between pneumonia and typhoid, but he made a quite rapid recovery within a week. The third was a young woman with what seemed a typical lobar pneumonia, but with what was then a quite unusual degree of cyanosis. She also recovered and beyond a speculative conjecture that these might be examples of what was then

[1] Read at a Meeting of the Victorian Branch of the British Medical Association on July 2, 1919.

called Spanish influenza, they were not definitely so regarded, although the second and third were quite similar to the early cases in January. Early in January, 1919, cases began to appear of what was looked on as atypical pneumonia, and a suspicion arose that something quite unusual was in progress. On January 20 there were five male patients in hospital all clearly suffering from the same malady, whatever it might be. On that day I telephoned to Dr. Robertson, at the Board of Health, and enquired whether he knew of any epidemic pneumonic happenings. The reply was that no cases had been reported. Three days later Dr. McMeekin furnished an account to the press of cases at the Melbourne Hospital.

It seems, therefore, that the disease which had almost certainly been sporadic in November, 1918, assumed a sudden epidemic character in Melbourne between January 10 and January 17, 1919.

Of the many and complicated bacteriological questions arising I do not feel competent to speak. Any further remarks must be looked on as a personal impression left, after a fairly varied experience of actual cases, and a reasonable acquaintance with the literature of this pandemic.

First as to the epidemiology. An uneasy feeling must be confessed to that we are at present much too self-assured of case-to-case infection by means of infected breath or droplets of mucus as the only means of conveyance of this affection. It is difficult to conjecture how the disease has been conveyed across thousands of miles of ocean by a series of personal infections alone. Even if we postulate a continuous chain of infection on shipboard of a disease with a short incubation and remaining unrecognized in a time when everyone was alert to avoid it, it does not in the least degree explain the sudden epidemic appearance on shore. Again in some fulminating cases there appears no infection of attendants. In other instances six to eight persons in a house became ill within a few hours of one another, which is much more like a food infection. Without in any way questioning the importance of case-to-case infection, the present experience has shown that isolation, however advisable, can never be effectively employed against this disease under modern conditions of intercourse. To admit so much and to conclude that nothing else is worth trying for, cannot be too strongly deprecated. If a community in future is to be safeguarded, there must be present research far away from test tubes and microscopes. We must remind ourselves that the recognition of the specific germ of an infectious disease is a beginning merely and not an end. We want environment. For example, Newsholme has shown that the movements of ground water have an influence on the prevalence of diphtheria. Even if we could be vaguely forewarned of the type of epidemic likely to prevail in certain years, it would constitute an enormous advance. It seems in some years epidemics hit us above the diaphragm and in others, below it. Whether or not it be mere coincidence, the last two or three years, which may be called influenza years, have been marked by a decreased incidence of typhoid. This is not merely local, for the war period has been of low typhoid incidence in Europe and Great Britain among civilian populations as well as in the armies. The secretary of the Board of Public Health has kindly supplied the following figures of reported cases of typhoid in Victoria for the first three months of the last three years:—

Month.	1917.	1918.	1919.
January	89	51	41
February	78	82	30
March	99	75	57

There has been also a rather curious alliance of influenza years with obscure affections like cerebrospinal meningitis and encephalitis. In Australia diphtheria has been epidemic.

It does not seem reasonable to associate this pandemic with any war conditions. It began in Spain where there was no war, and where as a result of the war the people were more prosperous than any time during the last 500 years. Nor is over-crowding of itself the whole explanation, for Belgium, the most crowded of all countries, has not suffered more than other places.

Coming then to the clinical aspect of the disease itself:—To you who have all seen it, the difficulty of diagnosis need not be insisted upon. Influenza, as remarked, has always been a loosely used term and Dr. F. J. Smith before the pandemic classed influenza in some respects as "the recently discovered refuge for the diagnostically destitute." Even in an epidemic there is not infrequently the old difficulty and there is an added difficulty in the knowledge that a positive diagnosis will throw the whole neighbourhood into a state of turmoil and excitement. Nevertheless the best working rule in the presence of an epidemic is to look on all with suspicion and to let the errors be on the positive, rather on the negative side.

In reviewing the clinical picture, there is no need to burden you with the varied symptomatology which is now familiar to everyone. The three outstanding features which might be selected as distinctive of this affection are:—

(1) The intense prostration.

In no other disease, except perhaps typhoid, is there evidence of such widespread and profound muscular poisoning. Even in patients who may not appear otherwise very ill, this feature is seldom wanting.

There is at the same time often a curious sense of "well being" especially in those cases which prove fatal. It is not uncommon to see patients obviously dying, who will reply that they feel "not too bad," and are at the same time apathetic as to any ministration or discussion which may be going forward. This condition is almost like a mental anæsthesia and must represent an intense poisoning of the highest cerebral centres. It is important not to be misled by this false sense of "well being." In contrast to this, it is also not uncommon in some patients who have passed the worst stages, to get symptoms which are due to a lively anxiety and resemble those of a "fear" or "emotional" phase. Two female patients seen at different hospitals suffered during convalescence from persistent vomiting which was seemingly of a pure emotional type since it subsided quickly after the consultative examination without any notable change of treatment. Another female who had suffered a

very severe attack, had a persistent chattering of the teeth so that she seemed to be in a rigor, but the nurse said it was almost continuous.

(2) The intensely septic appearance in the severe cases and to some extent in all cases.

I know of no condition in which the septic atmosphere may be almost felt as well as seen, without any other examination, except puerperal sepsis.

(3) The curious cyanosis present in some cases.

Of this it is not possible to say anything more than that no explanation of its occurence is yet forthcoming. According to the excellent paper of Abrahams, Hallows, and French, to which I am largely indebted, it is a condition of anoxæmia similar to that seen in cases of "gassing" at the front and due to the same causes. Anoxæmia simply means want of proper oxygen interchange. These observers found continuous inhalation of oxygen by Haldane's apparatus quite useless.

The first point of treatment which cannot be overemphasized, is the supreme importance of rest. Rest is no ancillary measure in the therapeutics of influenza; it is the essential. If reflection be made on the profound muscular poisoning, both voluntary and involuntary, and on the fact that many patients have in addition a hæmorrhagic œdema of the lung and a general hæmolytic tendency, the importance of rest from the very outset becomes manifest. Once a diagnosis is made and a satisfactory examination accomplished, there is no occasion whatever for daily exhaustive comparison of physical signs.

The tendency of treatment is to be altogether too busy with remedies. I have seen a patient taking two highly complex mixtures alternately at short intervals and getting pituitrin, camphor, strychnine and alcohol, in addition.

The best treatment seems to be purely symptomatic and the simpler methods succeed as often as the most complicated. A light linseed meal poultice laid well up to the top of the trachea and some simple linctus, even the homely honey and lemon, will relieve the harrassing cough as well or better often than the most scientific cough mixture.

Heroic measures of all kinds are mistaken zeal. It is curious to reflect that this has been pointed out in every recorded pandemic. Sir Thomas Watson in 1837 warned his students that: "The one mistake likely to be made was to be too busy with the lancet" and the same warning had been made 200 years before. The experience of bleeding, leeching, intravenous medication and so on has not been encouraging in the present pandemic. The basing of treatment in pneumonia on manometric readings as a single observation, by such drugs as pituitrin and the like, has long seemed to me to be mistaken. To treat low blood-pressure *per se* appears just as useless an enterprise as to treat high blood-pressure *per se* by such things as nitro-glycerine and the like. The effect of such remedies must be very transient. It may be allowable to quote the following from the article by Sir James Mackenzie in the special influenza number of *Practitioner* (January, 1919). "If one looks at the heart *post-mortem* in these fatal cases and sees the extensive damage done to the myocardium, one will recognize how useless the hypodermic injection of strychnine, caffein or oil of camphor, would be, drugs incapable of affecting the heart in health, let alone when it is in the grip of a severe poison. It is for this reason that drugs of the digitalis group also are useless." Possibly Mackenzie is here over emphatic, as he often is, and digitalis has seemed to me to be of distinct value.

Reliable brandy or whisky is in my opinion of great assistance and it is questionable whether the common practice of administering it in small divided doses is as good as a full dose given at longer intervals.

Sydenham remarked 300 years ago that the character of an epidemic changes and that some remedies which were proper at the beginning, become harmful when conditions alter. Possibly the character of the present epidemic has altered and heroic medication does not suggest itself as in the earlier cases.

The prognosis of this pandemic outbreak presents a peculiar paradox. In general, the prognosis is favourable. In particular, no prognosis is possible. No reliable prognosis can be made in a particular case until the patient is actually convalescent. Grave developments may supervene at any moment in what is apparently the mildest illness. Cyanosis is of evil omen in every instance and in some justifies of itself a pessimistic forecast.

Finally, a few words on the vexed question of prophylaxis. It does not seem possible to say much that is definite on the practice of inoculation. A lively personal scepticism must, of course, be supported with some sort of reasoning and may be briefly indicated in the following observations. In the description of the bacteriology of influenza by Hiss and Zinnsner they conclude their remarks by this sentence: "The immunity conferred by an attack of influenza, if present at all, is of very short duration." This is of course, also, a well-established clinical axiom and if true of the living organism, what is to be hoped for from inoculation with a dead organism? Apart from all other considerations and supposing inoculation to be possible with the actual organism of the disease, inoculation would still remain an impracticable procedure for the protection of a community, from the impossibility of reaching a sufficient number of people at the necessary time.

It must be recognized that a number of observers have expressed the opinion that inoculation has prevented the severe manifestations. To this it may be objected that it is not possible to predict what case, or what group of cases, will develope severe symptoms. Unlike vaccination for smallpox, there is no ocular evidence of the efficiency of the technique of inoculation and where all have been inoculated, no basis for any scientific conclusion as to its efficacy exists. The practice of inoculating "contacts" certainly seems mistaken, if such a thing as a "negative phase" is a reality.

The matter of masks is also one on which it is not wise to be dogmatic. The results of laboratory experiments have seemed to me inconclusive, because they only deal with what is taking place on one side of the mask and that, the outside. Practical experience has shown that the wearing of a mask is a physical burden and a physiological error. A burden, in

that it is difficult to keep in place and an error, in that it quickly leads to a feeling of oppression, which must depend on an altered metabolism due to the interference with the escape of respired air.

The employment of medicated steam in what are known as "inhalatoriums" has been condemned, after trial, by the medical Consultative Committee in New South Wales, as positively injurious; a finding which has my cordial agreement. It is a little surprising to find in the twentieth century a professional credulity sufficient to think that crowding a number of persons together in an atmosphere of steam at a temperature permitting of inhalation, for ten minutes, could disinfect anything or anybody.

With regard to other restrictions such as prohibition of public assemblies, closing of schools and so forth, a curious coincidence is to be noted. Both in Victoria and New South Wales the removal of these restrictions was followed almost at once by a general extension of the epidemic, so that it may be concluded that these measures were of some value in delaying its spread. At the same time such measures are productive of great commercial dislocation and even acute financial distress, and the relative value of these two aspects becomes one for very serious consideration, not only by politicians, but by the medical profession. Probably the chief advantage possible from such wholesale interference with community life, is that it may give time to a health authority to perfect its arrangements at the beginning of an epidemic. It has become clear that such measures, if employed at all, can only be applied for a very limited period and when applied, afford only a limited protection.

It must be admitted that the past affords a rather doleful picture. The immediate future, however, is filled with promise. A group of observers consisting of Bradford, Bashford and Wilson have described a filter-passing organism which they regard as the specific organism of influenza; and a second group in Bowman, Gibson and one of our own graduates, Captain Connor, have independently described results which seem to put the matter beyond doubt, although the published results are as yet little more than preliminary.

The next great advance will probably be, as already suggested, that our present conception of pandemic influenza as primarily a lung affection will be changed definitely to the recognition that it is a general blood infection with a local manifestation in the lungs and air passages, just as typhoid has a local habitat in the intestines, or diphtheria in the naso-pharynx.

Nor is the more remote future without vision of great results in the domain of treatment. The present somewhat strained relation between the bacteriologist and the pharmacologist will pass away and they will come together like Livingstone and Stanley to find they have all the time been looking for one another. Just as we keep a little store of quinine for malaria and of mercury and arsenic for syphilis, so there will eventually be a drug for every specific infection.

One last consideration is of more immediate interest. This pandemic is practically the first in history which has challenged the powers of a fairly universally-established public health administration. We should not be afraid as a profession to recognize and to confess that some of our most cherished hopes and beliefs in public health administration have been very badly shaken by this pandemic influenza. We should not in any spirit of injured pride or stiff-necked obstinacy attempt to bolster up or perpetuate official measures of control which have been proved all over the world to be futile. We ought not to shirk the fact that different infections demand different methods of official supervision and that it is impossible to handle epidemic influenza in the same way as epidemic small-pox.

SOME NOTES ON PNEUMONIC INFLUENZA.

By **Lucy Gullett, M.B., Ch.M.,**
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During the past two months 650 patients have been treated in this hospital suffering from influenza, varying from a mild febrile attack to a severe pneumonic infection. Of these, 86 have died, showing a mortality of over 13%. Of these, 23 were moribund on admission and died within a few hours.

After watching these cases, one wonders what signs and symptoms have guided one most as regards treatment and prognosis. Apparently there are no two cases alike. Some patients have a definite crisis, others a most indefinite lysis. None of the cases resemble the ordinary lobar pneumonia. Many patients have a second attack following closely on the first, and each may be quite different from the other, both in character and termination.

Temperature.—As regards the temperature, very little is to be learned from this as far as prognosis is concerned. In some of the very worst cases there has been little or no fever. In some the temperature has been subnormal, in others it has not exceeded 37.8° or 38.4° C., while in some it has been quite normal. In others, again, the temperature has been as high as 40.5° C. and 41.1° C. for days, and perhaps never under 40° C. for a week. Most of the temperature charts show marked remissions, as from 39.4° C. at 8 p.m. to 36.6° C. at 12 midnight, 38.9° C. at 4 a.m. and then perhaps a drop to 35.5° C. or a rise to 40.5° C.. A fall from 39.4° C. to 36.6° C. or 36° C. in four hours was not uncommon. In one case the temperature fell from 39.7° at 4 a.m. to 35.4° C. at 12 noon; it then rose to 39.4° C. at 6 p.m.. It varied from 37.8° C. to 40° C. for two days, then rose to 40.5° C. shortly before death. In looking through the temperature charts of those who died, I see that in the next case to the one referred to the temperature did not exceed 37.8° C. and was normal for three days before death occurred. In the next case, however, the temperature was 39.4° C. on admission; it fell to 38.9° C. the following day, but then rose steadily to 42.2° C., when death occurred. A fall in temperature from 40.5° C. to 37.8° C. was very common. One patient, who eventually recovered, suddenly collapsed when her temperature fell from 40.8° C. to 35.5° C. in four hours. A rise from 36.6° C. to 40.9° C. in eight hours happened in two cases. A fall of three degrees, even in three or four hours, was not uncommon. The most marked feature of the charts of those patients who died is the ex-

treme remissions. But many of those who recovered had similar remissions. And many who died had no higher temperature than 37.8° C.. But I think the extreme and sudden changes must have worn a patient out much more quickly than a steady high temperature.

Pulse.—The rapidity of the pulse-rate does not appear to be of definite significance. In the severe cases it was often between 120 to 160. In fatal cases it was frequently uncountable. I think it was rarely less than 120 in patients who died. In one, however, who died from sudden heart failure after eight days of apyrexia, the pulse-rate did not rise over 84; but when death from the pneumonic infection took place there was invariably a very rapid pulse. But, then, in many of those who recovered the pulse was equally rapid. As regards the character, this varied extremely. In some cases of severe double pneumonia the pulse remained firm and regular to within an hour or so of death. Many had a soft, collapsible pulse, but those with this pulse apparently died in the same way as those with the firm, regular one. Irregularity was fairly common and also a dropped beat, but no indications could be drawn from this, as some of those who recovered showed as much irregularity as those who died.

Respiration.—This was uniformly rapid in every case ending in death. But some patients who recovered also had respirations of 60 and even 72 to the minute. In many cases of quite a mild type the respiration was shallow and up to 50 or 60. There was only one case of Cheyne-Stokes respiration, in a patient who ultimately recovered. An anxious expression of the face we always regarded as a very bad sign. As the patient became worse, this anxiety turned to absolute fear, and before death occurred this look of fear was very marked. Very few patients who had this expression of fear recovered.

Colour.—I think we got a more definite idea as regards prognosis from the colour of the skin than from the pulse, respiration or temperature. There were three distinct shades noticeable in the serious cases. There was the purple cyanotic colour, very marked in some cases and often accompanied by jaundice. Perhaps the face would be jaundiced, with intense blueness of the lips and round the mouth and chin. The hands and arms might be jaundiced and the fingers blue. The colouring was so marked in some cases as to make even a dying patient remark on the strangeness of it. Very few of these patients recovered. Though one patient who had the worst colour of all and whose heart was so exceedingly weak that she could not be moved or even turned to change her bed, eventually recovered.

Another shade of colour was a distinct "lilac," often accompanied by a peculiarly ashen or leaden tint of the arms and chest. Sometimes the lilac shade came half way down the chest. In most of these cases the skin acted very freely, the patient being constantly wet and clammy. I think the prognosis in the "lilac" cyanosis was worse than in the purple cyanosis.

The third colour was red, a sort of magenta-coloured erythematous flush. This extended down from the face and neck over the front and back of the chest, so that the patient's skin resembled that of the surf-bather. This flush was more often seen in big, fat women. The prognosis in these cases was not as bad as in the more cyanotic ones.

In many cases the eyes were markedly suffused, conjunctivitis, which cleared up without any treatment, being very common.

The Heart.—Auscultation of the heart in cases of long standing, that is, of two or three weeks' duration, suggested some myocardial change. The sounds were soft and muffled, as if the heart muscles were very flabby. This was often noticeable in quite early cases of pneumonia. The heart, though flabby, nearly always reacted to stimulation. It was very rare to find a heart that would not react temporarily to strychnine or pituitrin. When the heart was seen *post mortem* in a long standing case, surprise was experienced that the patient had lived so long with such a pale, flabby heart.

The Lungs.—We did not get many early cases of pneumonia. By far the greatest number of cases of pneumonia had definite signs, râles, rhonchi or crepitations or bronchial breathing in one or both lungs on admission. Many were absolutely waterlogged. But in those patients who were sent in with influenza and who later developed pneumonia, we were able to obtain some knowledge as to the early signs. The two places in which adventitious sounds first appeared were the extreme bases of each lung and in the left interscapular region, along the inner border of the scapula, near the centre and between this and the vertebræ. The left base was more frequently attacked in the early stages than the right one. The first signs were usually a few crepitations suggestive of exudation at the bases and some bronchial breathing. Very often the pneumonia progressed no further than this, but in the fulminating cases it spread in a few hours upwards and often in twenty-four hours was half way up the back. In one patient with a history of having had influenza for six days before admission, there were no signs of pneumonia found in the lungs. The following day there was harsh breathing at both bases and commencing cyanosis. Two days later the skin was a marked lilac colour, tongue purple and both lower lobes full of râles and crepitations. The following day the pneumonic condition reached nearly to the apices, the patient was delirious, the face and chest cyanosed, the expression very anxious and death occurred during the night. The temperature varied from 38.3° C. to 39.4° C.. The respiration was 24 on the day of admission, 26 the following day, then 36, then 44 and 60 the day death occurred. Another case (under treatment at present) was watched from the beginning. The temperature was 38.8° C. on admission and there was a history of influenza for five days. No signs were found in the chest. The following day there was a distinct, small patch of rhonchi in the middle of the left interscapular region and a few râles with harsh breathing at the left base. The following day the temperature was 40.5° C. and the left lung was completely pneumonic and there were also signs of consolidation in the lower right lobe. To-day (the third day of the pneumonic signs) the temperature has not been under 40.5° C., the patient

is too ill to be moved to examine the chest, but she is deeply cyanosed and has low muttering delirium. The signs in this and the former case are very similar, but the temperature charts are absolutely different.

Tongue.—I tried to get some ideas as regards a prognosis from the condition of the tongue. Some tongues were large, pale, moist and flabby, showing teeth indentations. These patients usually did very well. Others were small, very red and shrivelled looking, with deep cracks and fissures across the centre. In these cases the prognosis was distinctly bad, though many of the patients recovered. Others, again, were absolutely magenta in tint; one was quite a bright lilac colour. All were dirty. The larger tongues usually had white or brownish fur all over, but some of the small, red tongues had only two narrow bands of greenish or brown fur, one on each side, leaving the fissured, clean centre. It was impossible to clean some of the dirty tongues, and they remained furred until all the chest signs had cleared up. The cracked tongues were usually very dry and painful.

Dyspnœa was present in every bad case. Death in a few cases was apparently due to sudden collapse and heart failure, without any very marked pneumonic symptoms. But in most cases death was due to apparent suffocation; there was practically no lung left to breathe with. After seeing the lungs *post mortem* in every bad case one recognized that the condition could never have cleared up. The liver-like lung could have never become spongy again, and in view of the dense pleuritic adhesions and the large hæmorrhages under the pleura and in the lung substance, which later would probably have formed fibrous patches, it seemed just as well that the patient had not lived.

In women the menstrual periods were more frequent; even the patients with mild attacks menstruated a week or a fortnight before it was due, and in some cases the flow was very profuse, lasting eight or ten days; often numerous clots were passed. Many women miscarried and premature births were frequent.

Urinary troubles were not common. Retention occurred in a few cases. Apparently the retention was accompanied by some suppression, since a history of 24 or 36 hours' retention was sometimes given on admission and on catheterization no more than 600 c.cm. were drawn off. Catheterization was not necessary for more than two or three days. Albuminuria was very uncommon.

Constipation was more common than diarrhœa, though the latter frequently occurred in big, full-blooded women. Vomiting did not often occur and was usually induced by coughing. In the early cases the cough was peculiarly brassy and irritating, just a slight cough, as if to clear the throat.

The throat was very often congested and the tonsils enlarged. The cough was an irritative throat cough. Later it became harder and after the patient began to expectorate, it got very loose. Some patients expectorated very freely. The sputum varied from bright red, frothy mucus and rusty sputum to masses of yellow and green, tenacious phlegm. In some very bad cases it was more like grumous pus, as if the whole lung were gangrenous and breaking down. In cases of long duration the sputum became nummular. The amount of expectoration that occurred in some cases was very considerable.

Complications were few. Empyema only occurred in two cases, in each case on the right side. Delirium was very common and the patient was nearly always conscious afterwards of what he had said or done while delirious. Delirium varied from acute mania, with attacks of wild shrieking, to the low muttering delirium, accompanied by carphologia, which sometimes occurred before death.

Hæmorrhages were not common. In women it took the form of excessive menstruation. Patients with hæmorrhoids had profuse bleeding at times. A few had hæmorrhage from the bowel. Epistaxis occurred sometimes, but was not frequent. Hæmorrhages under the skin and into the conjunctiva were seen in a few cases.

As regards inoculation before admission, all the patients were asked if they had been inoculated. Of the 86 patients who died, in 30 cases no history was obtainable, because the patient was either delirious or moribund (23 were moribund on admission and died within twenty-four hours). Thirty-four had not been inoculated and twenty-two had been done two or three times at least.

Treatment.—As soon as the patient was admitted, if it was an early case, that is, with a history of illness for no more than four days, he was given 1 c.cm. of mixed vaccine. Then an aperient, usually calomel (0.24 grm.), was given, followed by *mist. alba* six hours later. Any other treatment was purely symptomatic. If the cough was hard and the expectoration scanty a mixture of ammonium carbonate, tincture of squills and infusion of senega was given every four hours. If the cough was frequent and irritable a sedative mixture of squills and the compound tincture of camphor and morphine linctus were given frequently. Brandy was given in nearly every case as a routine, one tablespoonful every four hours. I am sure it saved many patients' lives. Any sign of heart failure, such as a weak or soft, easily compressible pulse, was at once treated by hypodermic injections of strychnine, pituitrin or camphor.

Headache was usually relieved by aspirin (0.3 to 0.6 grm.). This drug also relieved the severe pains in the back and limbs. Pleuritic pains were common. They were usually relieved by poulticing, antiphlogistin or painting the side with iodine and applying heat. Aspirin also relieved this pain. Very severe pain was in a few cases treated by morphine (0.01 grm.), but we were usually chary of giving this. Delirious patients and those who tried to get out of bed were given heroin (0.005 grm.). This was not given if the patient was waterlogged, however delirious, because the difficulty in breathing increased greatly. Latterly we have used the Mulford's antipneumococcic and antistreptococcic serum with apparently good results.

The great principle in treatment seemed to be absolute rest, no unnecessary movement, no turning, no raising the head to drink or cough. They remained on their backs for six or seven days after the temperature became normal. In the severe cases the patient was not even sponged more than was neces-

sary, only the face and hands. Some of the seriously affected patients became quite collapsed after being turned on their sides to be sponged. The illness in the severe cases is of such short duration that it is not worth turning the patient to rub the back with spirit to guard against bed-sores.

A large number of the patients suffered from pediculosis. This was so common and the pediculi were present in such great numbers that it seemed as if the pediculi must be the carriers of the disease. All the nurses, who had been trained in large city hospitals, agreed that they had never seen such cases of pediculosis. In some women, when the hair was turned up from the nape of the neck, the pediculi were so numerous that it resembled a hive of bees. Before death thousands of them would come out on the patient's face and wander across the pillows in a grayish mass. The nurses who nursed in the women's wards, were frequently attacked by pediculi and many more nurses became infected with influenza on the women's side than on the men's. I think pediculi must have spread the disease among the soldiers in France and England, because pediculosis was so very common.

One remarkable feature of the disease was the feeling of well-being in some of the very serious cases. A patient with a temperature of 40.5° C. for some days, a weak, thready pulse and a cyanosed colour would say she felt splendid and would ask when was she going to be allowed up or given something to eat! In some of these very bad cases the patient had no pain and no distress and only complained of hunger. Very many of those who died and who had perhaps been lethargic for a day or two before, would brighten up as the end approached and evince a very strong desire to live. It was this consciousness up till a few minutes before death that made the disease so very terrible. There is nothing very distressing in a death when the patient gradually sinks and becomes comatose and death comes while he is unconscious. But it is horrible to see patients either suffocating or dying of collapse who are acutely aware that they are dying.

It is too early yet to speak of the after-effects of this terrible disease. But one effect certainly will be some weakness of the heart. Many of the convalescent patients had a very quick pulse (120 or more on any exertion), even two weeks after they had had normal temperatures. Many of the nurses who contracted the disease, after returning to work, complained of breathlessness and palpitation, and the pulse-rate in these cases was rarely less than 100. What the effect on the lungs will be in those patients who have recovered from the pneumonic type, remains to be seen.

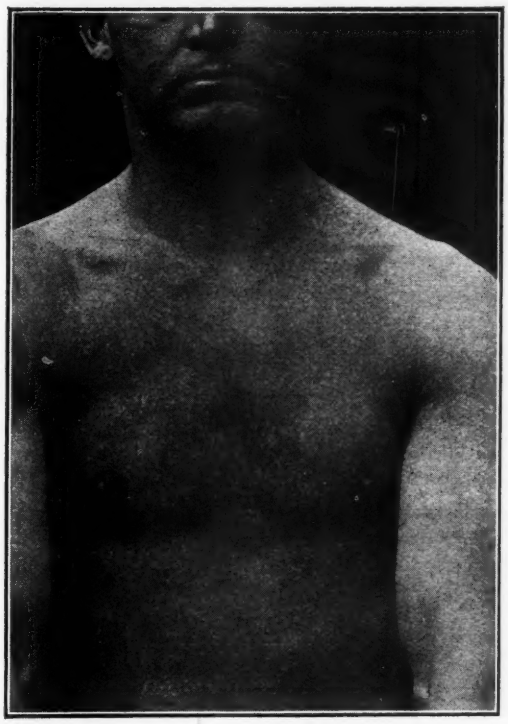
Authors submitting articles for publication with illustrations are requested to send either good silver prints of photographs or negatives or drawings executed with Indian ink on a stout, white paper. Lettering or other markings, such as arrows, circles and the like, should be indicated on a second print or a rough sketch. It is particularly important that skiagrams should be clearly printed and not defaced by ink or other markings. Illustrations in books from photographs are usually unsuitable for reproduction. Large pictures, when reduced, make the best illustrations.

Reports of Cases.

ARSENICAL KERATOSIS.

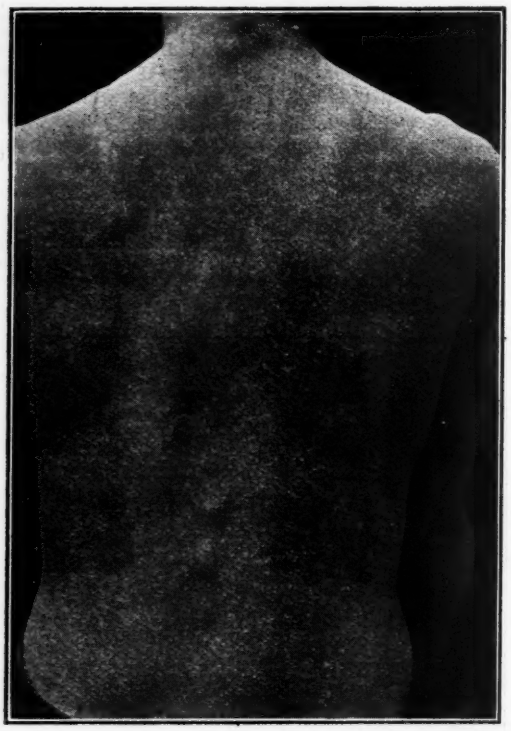
By **W. McMurray, M.D.,**
Honorary Physician for Diseases of the Skin, Sydney Hospital;
and
L. P. Johnston, M.B., Ch.M.,
Honorary Physician for Diseases of the Skin, St. Vincent's Hospital; Honorary Assistant Physician for Diseases of the Skin, Sydney Hospital.

A patient, *æt.* 33, presented himself at the Sydney Hospital Out-Patient Department for Diseases of the Skin on September 20, 1918, complaining of thickening of the palms and soles. The condition dates back to five years ago, when it was first noticed.



The patient says he commenced to have fits fourteen years ago and has been taking a mixture ever since (14 years) which wards off the fits. The skull has been trephined, but without relief for the seizures. During the past fourteen years the patient has had many attacks of vomiting and severe diarrhœa, no doubt due to the arsenic in the under-mentioned prescription.

On examination the patient has well-marked keratodermia of the soles and palms; these thickened areas are covered



with punctate keratoses. The body, especially the trunk, shows the well-marked rain-drop pigmentation of arsenic. The patient also shows the silver tongue of chronic arseni-

cal intoxication. The prescription which the patient used for fourteen years is as follows:—

℞—

Pot. brom.
Sodii bibor., aa 1.00 grm.
Liq. Fowleri, 0.3 mil
Aquam, ad 15 mils
Ft. mist., mitte ℥xvi.
Sig., 15 mils *ex aq. ter in die p.c.*

Reviews.

HYGIENE.

The recognition of a duty of medical practitioners to devote some of their time and to apply some of their knowledge to the prevention of disease is of relatively recent date. Hitherto hygiene has not been taught to students in such a manner that full use of the available knowledge can be made. Moreover, there is no machinery in existence for a general collaboration between the public health authorities and the general practitioner. We welcome the attempt that Dr. Charles Potter has made to place in a concise form at his disposal many of the problems of hygiene with which the general practitioner should be familiar.[1] This book has been written with the object of encouraging the practitioner of medicine to undertake a few duties in the great campaign to lessen disease. It represents an advance in teaching, although it does not embrace any new ideas or any real reform. The ground covered corresponds to a large extent to that covered by the standard works on public health. It has some of the defects of the departmental publications on hygienic subjects. The author is satisfied to repeat the obvious platitudes and the equally obvious exaggerations which appear in departmental publications under the misnomer of Laws of Health. Again, in the chapters dealing with the notifiable diseases, he bases his conception of the rôle that the general practitioner should play, on existing public health laws and public health practice. It would appear from one or two sentences, especially in connexion with enteric fever and diphtheria, that he really aims at a comprehensive and sound co-operation with the health department, although he hesitates to indicate the extent of assistance that the general practitioner could lend, if a thorough organization were established. In the majority of instances he refers to the application of general means of checking the spread of infection, rather than the rational search for the source of infection and the rigid enforcement of isolation. In regard to drainage, ventilation, water supply, lighting and other subjects usually included in books on public health, he sets out the facts and theories in a clear and intelligible manner. In recommending this book of Dr. Potter, we recognize that it represents but a beginning of a new aspect of training. This aspect has to be developed and a science has to be evolved before the community can reap the benefit of the application of preventive medicine in the daily life of the medical practitioner.

PNEUMONIC INFLUENZA.

A proclamation has been published in the *Commonwealth of Australia Gazette*, No. 102, of August 20, 1919, to the effect that as a quarantinable disease, namely, influenza, exists in the State of Tasmania, the State shall be a quarantine area and all persons and goods in that area shall be subject to quarantine.

The restrictions imposed by the Government of New South Wales on all persons within certain areas during the currency of the influenza epidemic have been cancelled by official notice in the *New South Wales Government Gazette* of August 19 and 21, 1919, in so far as they affect the areas of the municipality of Cobar and the towns of Nimmitabel and Canbelego.

In the *Queensland Government Gazette* of August 18 and 19, 1919, orders are published, imposing the usual restrictions aiming at the suppression of influenza on persons within the areas of the town of Warwick and the Shire of Rosewood.

For the purposes of *The Workers' Compensation Acts, 1916-1918*, Dr. C. S. Hawkes (B.M.A.) has been appointed Medical Referee for the whole of the State of Queensland.

[1] Elements of Hygiene and Public Health: A Text-book for Students and Practitioners of Medicine, by Charles Potter, M.D., B.Sc., M.R.C.P., Ed.; 1917. London: Henry Froude, Oxford University Press; Melbourne: E. R. Bartholomew; Cr. 8vo,, pp. 411, with 98 illustrations. Price, 12s. 6d.

The Medical Journal of Australia.

SATURDAY, AUGUST 30, 1919.

The Medical Congress of the Future.

The Federal Committete of the British Medical Association in Australia recently resolved that it could not deal with a resolution of the Australasian Medical Congress (Auckland, 1914) to the effect that all future congresses should be congresses of the British Medical Association. The members of the Committtee recognized that, apart from any consideration of the subject matter, it was not competent for the Australasian Medical Congress to pledge the Australian Branches of the British Medical Association to do a certain thing. This matter was introduced by Dr. Lockhart Gibson for a definite purpose. The Queensland Branch is faced with the task of organizing a congress to be held in Brisbane next year.. The Council of that Branch is more or less in the hands of the British Medical Association throughout the Commonwealth, and consequently has sought the opinion and desires of the other Branches through the Federal Committee. Dr. Lockhart Gibson explained to the Federal Committee his position at Auckland, when he moved the amendment, which was subsequently adopted as a substantive resolution. It is unfortunate that the chairman of the general meeting permitted the motion to be discussed, in view of the fact that the notice of motion prescribed by the rules of the Congress had not been complied with. It is held by some that the motion to which Dr. Lockhart Gibson's proposal was an amendment was out of order, and further that the resolution was invalid. Both these contentions, if substantiated, reveal that the incident is especially unfortunate. There is no doubt concerning the wishes of the majority of the members of the medical profession in Australia. They desire that the Branches in Australia of the British Medical Association should conduct the congresses in future. A minority, no doubt, would raise their voices in opposition, but as in everything in this world the majority must rule and the minority must bow to the decisions of the greater number.

There is a further difficulty in regard to this matter. For some time past the Federal Committee and the several Branches of the British Medical Association in Australia have been in communication with the parent Association concerning the powers possessed by the individual Branches and by the Branches collectively. The Council of the British Medical Association in London has revealed a strong desire to extend the autonomy of the Australian Branches as far as the constitution of the Association will allow. They are prepared to introduce modifications of Articles and By-Laws to bring about this extension. The constitution of the Association, as it now stands, clothes the central body of the Association with power to hold annual meetings or congresses. Whether the overseas Branches have this power is a matter that has yet to be ascertained. One thing is quite certain. If the Articles and By-Laws are found to restrict this power to the British Medical Association as a whole, the Council will introduce the necessary amendments to extend this power to the Australian Branches. In the meantime, it would seem that there is reasonable doubt whether the British Medical Association in Australia has the legal power to carry on the congresses. It is anticipated that the matter will be decided within a relatively short time.

Dr. Ralph Worrall, in an admirable letter published in this journal last week, points out that nothing should be left undone to weld together the members of the medical profession in one powerful organization, the British Medical Association. The confusion existing at the present time is not, we venture to state, the result of the resolution of the Federal Committee, but rather the outcome of a faulty method of arriving at a determination that has the support of the vast majority of medical practitioners in the Commonwealth. The Queensland Branch finds itself in a quandary and the Federal Committee is unable to assist it at the present juncture. It is an urgent matter and therefore prompt action is required. Dr. Worrall asserts that the Australasian Medical Congress has retired from business. If this be a fact, and this point must depend on the validity of the motion admitted to discussion without the

requisite seven days' notice, then no congress can be held until two questions have been settled. The first is: has the British Medical Association in Australia power to hold a congress? and the second is: what steps are necessary to authorize a Branch of the British Medical Association in Australia to proceed with the organization of a congress? The first question will be answered in a short time. In regard to the second, it is competent for any Branch of the Association in the Commonwealth to require the Federal Committee to take steps to obtain the necessary authority from the Branches.

It appears to us that, under the most favourable circumstances, a congress of the Australian Branches of the British Medical Association could scarcely be held in 1920. It may be deemed advisable to admit the invalidity of the resolution passed at Auckland in 1914, to hold the Australasian Medical Congress at Brisbane or elsewhere next year and to disband the Australasian Medical Congress voluntarily, after due notice at this meeting. If this were done, there would be ample time to provide machinery for the holding of a British Medical Association Congress in 1923.

ORGANIZATION OF INTERNATIONAL RESEARCH.

A conference was held at Burlington House, London, in October, 1918, in regard to international organization in science. It was attended by representatives of the principal academies or scientific societies of the countries allied together in the defence of the liberties of the civilized world. Resolutions were carried to the effect that the nations at war with the central powers should withdraw from the convention relating to international scientific associations and that new associations deemed to be useful to the progress of science and its applications should be established without delay by the nations at war with the central powers, with the eventual cooperation of neutral countries. It was decided that certain conventions, such as the Metric Convention, founded upon diplomatic consultations should be considered during the negotiations for peace. It was, however, agreed that these measures should not be applied to indispensable administrative committees dealing with navigation, meteorological telegrams, railways and telegraphs. A committee of inquiry was appointed to prepare a scheme of international organization to meet the requirements of the various branches of scientific and industrial research, including those relating to national defence. It was determined that a national council for the promotion of research should be formed in each country participating in the conference by its principal academy and that an international body should be formed by the Federation of National Councils.

A second conference was held at Paris during November of the same year. It was attended by delegates from Belgium, Brazil, United States of America, France, Great Britain, Italy, Japan, Poland, Rumania and Serbia. The academies of Greece and Portugal were not represented at this gathering. It was resolved that the committee of inquiry, constituted in London, should temporarily assume the title and functions of the Federation of National Councils under the style of the International Research Council and that an executive committee should be appointed to examine the proposals for the institution of new associations, to select separate special committees to consider in detail the formation of new associations, replacing those previously in existence and to summon a meeting of the International Research Council as soon as the Executive Committee considered this body to be in a position to assume its final form, the members of the Executive Committee then retiring from office.

In its declaration of policy the International Research Council recognized that all great advances in science were initiated by individual effort and that it has become increasingly necessary to encourage these efforts. It included, therefore, among its functions the task of actively encouraging all endeavours to supply the means and freedom necessary to those capable of conducting scientific researches of a high order. At the meeting in London, the conference placed upon record its opinion that all industrial, agricultural and medical progress depends on pure science and drew the attention of governments to the importance of theoretical and disinterested researches. It urged the creation of large laboratories for experimental science, both private and national.

As it was agreed that Australia should be one of the nations entitled to join in the formation of the new associations, the Secretary of the International Research Council invited the Royal Society of New South Wales as the senior Society in the Commonwealth of Australia to take steps to organize an Australian National Research Council, which would nominate national committees of the associations which Australia might wish to join. The scientific societies of Australia were also invited to send a representative to the meeting of the International Research Council at Brussels in July, 1919. The Royal Society of New South Wales invited representatives of the various Royal Societies in the different States, of the Institute of Science and Industry, of the Australasian Association for the Advancement of Science and of the Linnean Society of New South Wales to meet in Sydney to consider these proposals. The meeting was held on August 21, 1919, at the Royal Society's House. It was resolved to elect a provisional Australian National Research Council of thirty members to hold office until the next meeting of the Australasian Association for the Advancement of Science. The General Council of that body would then elect the permanent Council. It was decided that each Council should hold office for two years and that a proportion of the members should not be eligible for re-election. An Executive Committee was appointed, consisting of a chairman, Professor T. W. E. David, C.M.G.; Honorary Secretary, Mr. R. H. Cambage, and three members, Mr. J. H. Maiden and Professors J. A. Polloch and H. G. Chap-

man. The representatives of the medical sciences elected to the provisional Council were Professors Sir Harry Allen, W. A. Osborne, D. A. Welsh and H. G. Chapman. Up to the present time Australia has not been directly represented upon the governing bodies of the various international associations. During the discussion, the hope was expressed that the Council would foster an Australian national spirit.

PROTEIN TREATMENT OF ENTERIC FEVER.

There is no mere difficult task in medical practice than that of gauging the value of a particular form of treatment. As a rule the severity and fatality of selected diseases vary widely in succeeding series of cases. Even when the system of control of applying the treatment to be tested to each alternate case is carried out, large numbers of cases have to be included to exclude the chance grouping of a smaller proportion of severe and fatal cases in the experiment or the control group. When the case mortality ascertained for a very large number of cases, can be reduced considerably below that which is observed in untreated cases, as is the case with diphtheria treated with antitoxin, all doubt is dispelled. But when series of cases treated symptomatically reveal a mortality comparable with the mortality in cases treated by a selected method, caution is needed before an apparent benefit is ascribed to the treatment. A striking example of this sequence of events is met with in the case of influenza. Few diseases have been subjected to so many and so varied methods of treatment as enteric fever. At present, notwithstanding all the claims put forward, no one form of treatment has been accepted as reliable. It appears that a deliberate test of vaccine treatment in a series of at least one thousand cases, with every second patient acting as a control, has not been attempted. Vaccine treatment of enteric fever dates back to 1893. Besredka's ingenious suggestion of employing living sensitized bacilli and Ichikawa's employment of dead sensitized bacilli are reported to have yielded good results in the hands of many clinicians, although irrefutable evidence of a curative action has not, as far as we are aware, been presented. Dr. P. T. Lantin has endeavoured to gain some impression of the value of vaccine treatment and of non-specific protein treatment of enteric fever in a series of 98 patients admitted to the Philippine General Hospital.[1] He admits that the limitation of the material precluded him from forming a definite opinion concerning the relative value of the six modes of treatment employed. From the clinical aspect it appears that some benefit resulted from the application of dead sensitized vaccines, although the mortality does not appear to have been reduced. The total number of persons treated in this manner was 40, of whom 30 received the vaccine intravenously and ten received it into the substance of muscles. The most striking piece of evidence is the reaction on the temperature curve. The number of persons treated with ordinary vaccine was nine, but this series only contained one case described as severe and toxic. The evidence offered in the advocacy of peptone, milk and colloidal gold treatments is of small value. There was no definite reaction following the intravenous injection of the colloidal gold, and the same holds good regarding the other forms of non-specific therapy. Dr. Lantin arrives at the conclusion from these limited observations that the results obtainable by protein and colloidal gold lend support to the theory that the action of vaccines does not depend on the production of any specific antibodies. The literature on the subject does not assist him in pressing for the acceptance of the non-specific theories of the treatment of enteric fever, nor does his experience of close on one hundred cases justify him in recommending any one form of treatment before all others. It appears that there is a fertile field open for systematic research in this connexion. Enteric fever is sufficiently common in Australia to render it possible for a group of practitioners to set up a plan of campaign and to carry it through until the value of each of the modern methods of treatment can be accurately accessed.

[1] *The Philippine Journal of Science*, Vol. XIV., No. 1, January, 1919.

EPITHELIAL XEROSIS OF THE CONJUNCTIVA.

Xerophthalmos or xerosis of the epithelium of the conjunctiva is a rare affection and hitherto has been regarded as a secondary result of some local inflammatory, infective or traumatic lesion of the eye. Its association with trachoma and with diphtheritic infection of the eye has secured for it a recognition among ophthalmic diseases. Major R. G. Archibald has observed this condition in three Sudan natives[1] and on careful investigation has come to the conclusion that the affection was not secondary to some other eye condition, but was produced primarily by a diphtheroid, indistinguishable from the xerosis bacillus. In one case there was a history of the existence of the same eye affection in other members of the family. The xerotic areas were painless and did not give rise to any discomfort. The vision was unimpaired. The areas measured about 0.5 cm. in diameter, were white and their substance was of a viscid consistency. Bacteriological examination of the viscid material yielded the diphtheroid organism in pure culture. The bacilli were present in large numbers and they were regarded by Major Archibald as undoubtedly the causal organisms of the condition. In order to test the pathogenicity he inoculated the abraded surface of the conjunctiva of a rabbit with the culture and produced thereby a typical epithelial xerosis. He supports his contention of a primary infection, not only by the absence of a preceding diphtheria, trachoma or trauma, but by the absence of night blindness and disturbance of nutrition. The affection has not hitherto been described as a tropical infection.

[1] *The Journal of Tropical Medicine and Hygiene*, May 1, 1919.

On August 21, 1919, the Legislative Assembly of Victoria considered the *Nurses' Registration Bill*, which was submitted for second reading by the Chief Secretary. The debate was adjourned after a general discussion until August 26, 1919. A short review of the proceedings will be published after the measure has been dealt with.

We regret to announce the death of William Evan McFarlane, of Irvinebank, Queensland, which took place on August 17, 1919.

Abstracts from Current Medical Literature.

ORTHOPÆDIC SURGERY.

(73) War Contractures.

From early days of the war the nature of the frequent contractures has been a subject for controversy. One theory advanced was that the condition was a localized tetanus, a condition which has recently been recognized and occurs as a result of the wide use of antitetanic serum as a prophylactic for generalized tetanus. In the early stages the diagnosis between localized tetanus and hysterical spasm may be extremely difficult. Contractures which last more than eight weeks, are probably hysterical, even if they are tetanic at first. Spasms which immediately follow wounds are hysterical; after the lapse of some time, either condition may be present, but sleep and anæsthesia abolish the hysterical condition, whereas a wooden and unvarying hardness of muscle tissue indicates tetanus. Increase in size of muscles, without tenderness or subcutaneous œdema, is, together with the production of contraction by external stimuli, conclusive evidence of localized tetanus. Babinski and Froment have advanced a reflex contraction theory. Arthur F. Hurst (*Brit. Journ. Surg.*, Vol. VI., No. 24) thinks that reflex, protective contractions occur immediately after injury, but as such never persist. Hysteria is invariably the cause of contracture in chronic cases. The posture of hysterical contracture is identical with that which happened to exist at the time the contracture developed. In some cases the patient assumes a position which gives relief to pain, or unconsciously perpetuates some reflex spasm or some inhibition. In other cases the position in which the surgeon places the patient after operation is imitated. Contractures are always associated with more or less paralysis; but the reverse is not the case, as uncomplicated hysterical flaccid paralysis is not uncommon. In most cases a single segment of a limb is involved, the hand and foot being most frequently concerned. In the hand there are three common types: the extended hand, the flexed hand and the intermediate position which is generally assumed in flaccid paralysis. The wrist is usually flexed; the forearm is held midway between pronation and supination, while the elbow is generally flexed. In the leg *talipes equinus* is a common position. Circulatory changes follow hysterical contracture or flaccidity. Venous and lymphatic stasis is often present and the œdema may be marked. As a result, the physiological properties of the paralysed muscles alter. The muscles may respond with abnormal slowness to galvanic stimulation; but this phenomena disappears when the limb is warmed. Stiffness of joints as a result of defective circulation may be present in cases of long standing. The defect in circulation has been demonstrated by Babinski and Froment by the lessened pulsation in the arteries on the abnormal side. Changes due to malnutrition, such as atrophy of the subcutaneous tissue, decrease in the size of the limb and folding of the skin may occur. It is probable that the anterior cornu cells atrophy, as they do after amputation. Increased transparency of bones is noticed in radiographs. When hysterical paralysis, with or without contracture, has persisted for some months and psychotherapy leads to rapid recovery, it is often observed that, although the patient is able to perform normal movements, he tends to maintain the abnormal posture, as soon as his attention is withdrawn from the affected limb. These postures persist, even in anæsthesia and in sleep, for some time after cure. The author believes the explanation can be found in what Sherrington has described as postural length and postural tone. Each individual muscle has a certain amount of tone when at rest, and as it is at rest for the greater part of the day, its anatomical structure adapts itself to this tone. It is capable of becoming shorter as a result of contraction and longer as a result of relaxation. With continued contraction in hysterical contracture, organic disease or tetanus, the postural length is kept constantly shorter, but by teaching the patient to hold the limb consciously in the correct position a new postural tone and length is easily and rapidly acquired. Treatment in hysterical conditions begins with a full explanation of the cause of the symptoms in language suited to the patient's intelligence, and is followed by persuasion and re-education. Manipulation sometimes acts as suggestion, but hypnotism has been almost entirely discarded. The secret of cure is the active co-operation of the patient. Massage and electricity are of no use in these cases. Difficulty in obtaining relaxation of the patient's muscles may be overcome by carrying out passive manipulations in very hot water. Recovery is followed immediately by some occupation. The author relies entirely upon the active movements of everyday life in his re-educative treatment and has never found apparatus to be necessary.

(74) The Modern Treatment of Pott's Disease.

F. Calot (*Le Monde Médical*, March, 1919) emphasizes the importance of early diagnosis in the successful treatment of tubercular spondylitis. Too frequently it is the presence of deformity or paralysis which determines the physician's opinion. The author describes "presumptive signs." These are intermittent or continuous pain, either localized in the back or radiating into neighbouring regions, and the presence of muscular spasm, leading to rigidity. "Certain signs" of the disease are pain over the spinal processes on strong pressure or lateral movements of the vertebræ, limitation of the movement of the spinal column and the alteration of structure, as shown radiographically, though in 75% of early cases there is no evident change seen by this method. Treatment comprises two lines: (1) Rest in the horizontal position. (2) The application of a plaster jacket. The jackets are made in two models: (1) with a straight collar enclosing the neck for lesions below the sixth thoracic vertebra; (2) with a support for the base of the skull in cases where the disease is situated above the sixth thoracic vertebra. In cases where abscess is present, intervention is not advised unless the abscess is readily accessible or is threatening the skin. Even in retro-pharangeal abscess, puncture from the side of the neck and injection with the author's fluid is advised. In this way fistulæ are avoided and the risk of sepsis minimized. In Pott's disease with paralysis the larger plaster is applied with a window opposite the seat of obstruction and pressure is made through this directly on to the diseased vertebræ. Deformities, the author contends, are reducible. His well-known method of gradual correction has been used for sixteen years and has been copied and modified by many surgeons. These modifications cannot compare with the plaster method, in which he uses a large plaster and applies pressure over the kyphosis.

(75) Loose Osteo-Cartilaginous Bodies in the Shoulder Joint.

Osteo-cartilaginous bodies originate in different ways: (1) by direct trauma; (2) from a brittle condition of the joint surfaces (*osteochondritis dessicans*); (3) by hypertrophy of the synovial membrane, which becomes cartilaginous in places and pedunculated sections break off; (4) by marginal osteophytes breaking off; and (5) as part of a general process, such as a Charcot joint (M. S. Henderson, *Amer. Journ. Orthop. Surg.*, December, 1918). Only once has the author seen these bodies in the shoulder. The patient was a young woman, who had complained of pains in her right shoulder for 12 years. The pain was irregular and at times lasted for a few minutes, when it was followed by almost complete relief. On examination there was a suggestion of something slipping under the fingers, and the radiograph showed multiple shadows round the glenoid cavity. Operation was undertaken and the shoulder joint was opened through a posterior incision. Ten loose bodies were removed and the joint presented evidence of hypertrophic arthritis. The loose bodies were found to be composed of an outer shell of cartilage and an inner nucleus of bone.

(76) The Treatment of Chronic Osteomyelitis.

C. F. Eikenbary describes the operative procedure adopted by him in cases of chronic persistent sinuses in chronic osteo-myelitis due to gun-shot injuries (*Jour. Orthop. Surg.*, February, 1919). A tourniquet was always applied and a long incision made over the necrosed area as indicated by the radiogram. If conveniently placed, the sinus was included in the incision; if not, it was disregarded. The bone was chiselled away

in the region of the sinus and the sequestrum was removed. Bone was also removed for about 2.5 cm. above and below the necrotic area. The walls of the cavity were made smooth, all angles and spicules being removed. Plain gauze was used for packing and almost without exception, healing took place within four weeks.

MORPHOLOGY.

(77) The Early Morphogenesis of the Human Thyroid Gland.

E. H. Norris (*American Journ. of Anatomy*, November 15, 1918) presents a study on the early morphogenesis of the thyroid gland in the human subject in an attempt to formulate an interpretation of the processes involved in the development of the median thyroid. For descriptive purposes the morphogenesis of the thyroid gland is divisible into eight stages. (1) Pre-*Anlage* stage. This represents that period in embryonal development between the time of the formation of the entodermal pharynx and the appearance of the thyroid *Anlage*. (2) Early *Anlage* stage. The *Anlage* is first recognizable as an evagination of the mesobranchial region of the pharyngeal floor between the ventral extremities of the first two pairs of gill pouches. The cavity of this diverticulum is encroached upon by a localized thickening of the epithelium in its floor. (3) Early growth stage. This is represented by three types, owing their differences in form to various distributions of the growth activity of the *Anlage*. (*a*) The first presents the form of a solid pyriform globose bud suspended from the floor of the pharynx by a short, solid neck. In type (*b*) the suspending stalk is hollow and tube-like. Type (*c*) shows a clearly bi-lobed bud, each lobe being suspended by a short, hollow stalk. (4) Beginning separation stage. In this, as in the preceding stage, there are three types, each produced by a lengthening of the suspending stalk of the three previous types. (5) Complete separation stage. The earliest instance of this is in an embryo of 3.9 mm. length, while the oldest embryo showing the gland still attached to the pharyngeal floor was 7 mm. in length. There is great variability in the form of the gland at the time at which its independence becomes established. The stalk may break at its proximal end (pharyngeal), at its distal end (glandular), at both ends, or it may divide midway between the pharynx and gland mass, thus accounting for variations met with in full development along the course of the "thyroglossal duct," such as the so-called lingual or thyroid rests, suprahyoid bodies, etc.. (6) Cavity formation stage. In embryos of 7 mm. length there appear within the gland mass a number of completely closed cavities with a distinct outline and no visible content. These cavities do not persist for long, but soon open to the outside and are invaded by the surrounding vascular mesenchyma. Thus is reached (7) the plate stage, when the gland is composed of smooth, two-celled epithelial plates, which anastomose freely and ultimately come to form an extremely complex structure. Other plates are formed from these by budding and growth. Apparently the upper poles of the lateral lobes of the adult gland are formed from these secondary plates. (8) Follicular stage. The epithelial plates are gradually replaced by developing thyroid follicles, which form in the plates and are thus entirely independent of the earlier transient intraglandular cavities, which in turn are independent of the primitive lumen of the thyro-glossal duct. By presenting the morphogenesis of the thyroid gland in this way it is possible to co-relate other observations and interpret harmoniously the various descriptions afforded by the literature. With regard to stage (6) and the development of intra-glandular cavities, if the vertebrate thyroid is the phylogenetic representative of a true externally secreting gland, it might be suggested that these cavities appear in an attempt to reproduce the ancient lumen or duct of the ancestral gland. Such a theory would harmonize known anatomical and physiological facts regarding the endocrine function of the thyroid. The lumen of the thyroglossal duct does not extend into the body of the gland at any time; cavities found there must, therefore, be morphologically independent of it, although they may be phylogenetically related.

(78) The Gonads as Controllers of Characteristics.

In the *Journal of Experimental Zoology* (Vol. 28, No. 2, May 20, 1919) C. R. Moore discusses the question of the physiological properties of the gonads as controllers of somatic and psychical characteristics in the rat. This is only a preliminary attack on the subject, as a fuller discussion is being reserved until his results with guinea-pigs can be finalized. Moore's studies have been entered upon in order to test out Steinach's experiments and ideas concerning this subject. Steinach has reported that an ovarian graft in a completely castrated young male rat or guinea-pig will so modify subsequent development that the animal becomes somatically and psychically a female. It is proportionately lighter in weight, shorter in body length, hair finer and smoother and pelvis smaller than in normal males of the same age. They are more docile, there is an absence of male instincts towards female rats and their actions towards young are characteristically that of a mother. In the reverse experiment of grafting testicular tissue into completely spayed young females, the animals become masculinized as maturity is reached. It was supposed that a secretion from the interstitial cells of the grafted organ in each case is the controlling factor, since the secondary characteristics of the opposite sex do not appear, unless the implanted gonad obtains vascular connexions and remains in a living condition after the transplantation. In addition to following Steinach's technique in these homoplastic transplantations, Moore prepared controls and variations such as castration and spaying without subsequent transplantation, which transplantation was made without disturbing the normal gonad. As a result of his experiments, Moore states that weight and body length, being but poor criteria of maleness or femaleness under abnormal conditions, they are therefore unsatisfactory for determining changes associated with cross transplantation of gonads. As regards changes in the hair, mammary glands, skeleton and fat deposit, Moore finds that they are liable to so many variations that they cannot be safely used as indicators of changes in sex characteristics. However, observation on the behaviour of these rats has given much evidence in support of the idea that the sex gland regulates the characteristics of the animal. It is beyond question that the early castrated male rats, which have received implanted ovaries (feminized males), display a maternal behaviour to the young. They enter the nest with or without the mother, nestle the young and repeat exactly the mother's behaviour when the young attempt to suckle, this latter being a very definite and characteristic action. The normal male and masculinized females seldom, if ever, went near the nest and took no interest in the young. As regards the masculinized female, attempts were made by them to imitate the male in the act of copulation in an absolutely typical set of reactions, such a thing having never been observed among normal female rats. Thus, the only observations of any value in corroboration of Steinach's experiments appear to be psychical, as evidenced by sexual reactions and maternal behaviour of the rats.

(79) Lymphatics of the Omentum.

Many writers refer to the presence of the lymphatics of the omentum, but no convincing proof of their existence has yet been given. Others have denied their presence in the omentum. H. R. Casparis, in the *Anatomical Record* (Vol. 15, No. 2, September 20, 1918) relates his many attempts and final success in proving their presence. Undoubted proof was obtained by forcing silver nitrate solution (0.25%) through the omental vessels under high pressure. The omentum was then removed, immersed in distilled water and exposed to sunlight until the browning occurred. Then it was fixed, cleared and examined, when lymphatics were to be seen running chiefly with the larger blood vessels, but in no case were they numerous. Their presence was demonstrated in the omentum of rabbit, cat, dog and man. In other experiments the omentum of a live animal was kept immersed in a carmine solution, after which carmine granules were found in the *cisterna chyli* and thoracic duct, showing that the lymphatics furnish a channel for absorption from the peritoneal cavity, which is a direct path, without any filtration through glands.

INFLUENZA AND MARITIME QUARANTINE.

(Continued from page 162.)

Inter-State Quarantine.

As it was recognized that maritime quarantine as a measure of control of influenza was a novel experiment, the result of which could not be foreseen, it was deemed advisable to seek the opinion of delegates from the several States concerning the measures that should be adopted in the event of an epidemic occurring in any part of the Commonwealth. A conference was held to which the Minister for Public Health, the professional head of the Health Department and the President of the Branch of the British Medical Association of each State were invited. The following resolutions were adopted:—

(*i.*) That the disease be designated pneumonic influenza.

(*ii.*) That in view of the heavy mortality attendant on epidemics of pneumonic influenza in other countries and the evidence that its spread coincides with the rate of human travel, this conference is of opinion that it is desirable in the public interest to take any measures to check public travel that are at all likely to lessen the spread of the disease. It is recognized that such restriction does not afford an absolute safeguard and is liable to prove ineffective at some stage in the course of the epidemic; but the conference, while recognizing this, nevertheless, considers that the attempt to limit the original outbreak by this means should be made and should be continued until proved unsuccessful, in order to give neighbouring States time to complete their organization and also to afford a delay which may result in some diminution of the virulence of the epidemic.

(*iii.*) That the chief health officer should immediately notify to the Director of Quarantine the presence of any case of pneumonic influenza in his State and that the Commonwealth should take steps to proclaim the State to be infected with pneumonic influenza.

(*iv.*) That, upon the proclamation of any State as infected, all traffic with that State be suspended until a case breaks out in a neighbouring State, when traffic may be resumed between the infected States:

Provided that inter-State sea traffic be permitted subject to strict quarantine, no person being allowed to travel from an infected State, except on a permit issued by the Commonwealth Government;

Provided further that these restrictions shall not apply to inter-State local traffic amongst residents within ten miles of the border of any State in an area which is clean, or to such further areas as may be exempted with the concurrence of the contiguous States and of the Commonwealth Government.

(*v.*) That upon the proclamation of any State as infected, the Commonwealth should take complete control of all inter-State traffic, both by land and sea; and that the States should render to the Commonwealth every possible aid and co-operate in the effective carrying out of the regulations.

(*vi.*) That, in the event of an outbreak of pneumonic influenza, no restrictive measures need be applied to traffic as between State and State in respect of goods and mails, provided that all care be exercised to prevent personal contact between persons handling the goods.

(*vii.*) That this conference is of opinion that, in order to deal with pneumonic influenza, there should be local district isolation and quarantine by each State; that, if any State has not sufficient power to effect this, it should obtain such power; and that the chief executive officer of the Health Department should keep the Chief Quarantine Officer of the State concerned advised of the progress of the epidemic and of the action taken.

(*viii.*) That the repeal of the proclamation declaring any State to be infected with pneumonic influenza be left in the hands of the Commonwealth Government.

(*ix.*) That it be recommended that an advisory committee be appointed in each State, consisting of the chief health officer and a limited number of members of the British Medical Association.

(*x.*) The conference recommends that immediate action be taken by the States for—

(*a*) The establishment of vaccine depôts;

(*b*) the establishment of special hospitals and the organization of ambulance transport;

(*c*) the organization of medical and nursing assistance;

(*d*) the issue of advice to local authorities through the press and by circular;

(*e*) arranging for the supply of respirators to the public.

(*xi.*) The conference recommends that, in the event of an outbreak of pneumonic influenza in any State, it is considered advisable to close all places of public resort, such as theatres, music halls, picture shows, race meetings, churches, schools; to prohibit all public meetings, and to take action for the regulation of all out-patient departments of general hospitals.

(*xii.*) The conference recommends the Commonwealth Government to request the Minister of Defence to immediately disband all military camps until all immediate danger of an outbreak of pneumonic influenza has passed.

(*xiii.*) The conference recommends that the Commonwealth Government should request the Minister of Defence to hold the military medical and nursing organization available in such a way that they can be utilized in any part of the Commonwealth in the event of an outbreak of the disease for service under the direction of the State health authorities.

The Minister, the Honourable W. Massy Green, expressed the opinion that it would not be possible to limit the disease by establishing a quarantine area on the mainland, but other delegates insisted that an attempt should be made. The resolutions of the conference were accepted by the Government of the Commonwealth and the Governments of the several States. Nothing transpired to interfere with the acceptance of these resolutions until the appearance of the first cases of influenza in Melbourne. This took place on or about January 10, 1919, while the officials of the Health Department of Victoria did not admit that influenza was present in the State until January 23. The Chief Health Officer of Victoria notified the Director of Quarantine in accordance with the third resolution of the conference of the facts on January 28. The State of Victoria was proclaimed an infected State on the same day. The first case of influenza occurred in New South Wales in the person of a traveller from Melbourne on January 21. The Director-General of Public Health of New South Wales notified the Director of Quarantine on January 27, 1919, and this State was then proclaimed an infected State.

Serious divergencies arose in the practice of the State Governments from the provisions of the resolutions. The New South Wales Government, instead of giving effect to the terms of resolution four, suspended all traffic by land and considered that traffic by sea should be governed by the condition that any vessel arriving in Sydney from Victorian ports should not have communication with the shore until 96 hours had elapsed since the departure of the vessel from the last Victorian port. This action was taken without any representations being made to the Commonwealth that the State Government did not intend to abide by the terms of resolution 4 of the conference.

The Queensland Government notified the Commonwealth Government that it did not intend to abide by the resolutions. The Western Australian Government seized the Commonwealth trans-continental train and detained it for several days' quarantine. It thus became impossible for the Commonwealth Government to continue a pretence at controlling traffic, while the State Governments were imposing each day new restrictions without reference to the Commonwealth Government. At the request of the Tasmanian Government, the Quarantine Department continued to control traffic by sea with that State.

A summary of the restrictions imposed by the Governments of the five mainland States is given. This state of

affairs persisted until February 6, 1919, when the control of traffic was between South Australia and the other States handed over to the Commonwealth Government by agreement. On April 16, 1919, the Commonwealth authority took over the control of traffic between New South Wales and the other States and on May 19, 1919, the same was effected concerning the traffic from and to Queensland. It was considered unwise to exercise control under the constitutional and legal powers vested in the Commonwealth Government until it had been demonstrated that the policy of the several States had failed to keep the areas of the States free from infection.

The control of border traffic proved impossible. There were numerous evasions of the restrictions. At certain points where there was no supervision between New South Wales and Victoria, a regularly constituted traffic was established, by means of which persons were smuggled across the border. The difference between maritime and land quarantine is emphasized. In the former the means of approach, the vessels, can be controlled without exception, while in the latter the border cannot be guarded along a stretch hundreds of miles in length.

The questions are put whether the epidemic prevalent in Melbourne in January was due to an escape of infection from the maritime quarantine defence or whether it was due to a continuation of the disease that had been prevalent during the latter months of 1918. Dr. Cumpston argues that if it be held that maritime quarantine had proved unsuccessful, after very careful measures had been carried out consistently for many months, a system of inter-State control that could not reach more than a proportion of the persons moving from one State to another, could not influence the spread of the disease. Since no case of influenza was met with at the camps situated at the point where the main trunk line from New South Wales to Queensland crosses the border, it is obvious that the camp achieved no good purpose. If cases of infection were overlooked and the persons allowed to continue on their journey, the existence of the camps would be more vicious than useful. During the period when no cases were detected at the camps, several persons suffering from influenza were found among those travelling by sea from New South Wales and Queensland. The conclusion arrived at is that the whole scheme of border control must be determined by the fact that it is necessarily incomplete.

It was laid down in 1912 at the International Sanitary Conference at Paris that land quarantine must not be resorted to. The Commonwealth Government has therefore urged that, as far as land traffic is concerned, the only practicable means of endeavouring to check the spread of influenza consists in the medical examination of persons 48 hours before they depart by train from one State to another, a second examination *en route* and the obligation on the traveller to report for three successive days at the point of destination to a quarantine officer or to a State medical officer.

It is anticipated that ultimately it will be necessary for the Commonwealth authorities to control the main principles and the main administrative functions, dovetailing with the administration by the State authorities, when the Commonwealth is threatened with a serious epidemic.

A short section is devoted to the position taken up by the Governments of Western Australia and of Tasmania. This part of the publication closes with a few general remarks. It is stated that the principal difficulties encountered were that arising from the fact that the State Governments, after having agreed to a certain line of action, departed from the agreement without notice to the Commonwealth Government or to the other parties to the agreement. In the next place, the Commonwealth authority was unable to take the initiative to proclaim a State as infected and to launch the necessary measures until the State authorities had informed them of the fact that the disease had broken out within the State. In the third place, the difficulties were enhanced by the attitude adopted by a portion of the daily press, which forced the public into an attitude of panic. In some States the control of the situation was taken out of the hands of the professional advisers and placed into the hands of committees with very little experience in the control of epidemics.

(To be continued.)

British Medical Association News.

SCIENTIFIC.

A meeting of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on July 2, 1919, Dr. J. W. Dunbar Hooper, the President, in the chair.

Dr. Alex. Lewers opened a discussion on pneumonic influenza (see page 167).

Dr. K. Hiller said that he wished to address himself to a condition which was then making its appearance in Melbourne. This condition seemed to follow in the wake of the influenza epidemic and had been designated *encephalitis lethargica*. During the course of four weeks there had come under his observation six cases that he placed definitely in this class. The first case was a very mild one. The chief features were overwhelming sleepiness, later diplopia and still later facial paresis. The sleepiness was so great that the patient fell asleep while at his work and had to excuse himself when entertaining his friends because he fell asleep in his chair. He had had only three waking hours during three days. The second patient had consulted his medical adviser for double vision and for general malaise. A few days later he became very sleepy; he was salivated and gradually became mumbling in his speech. He had difficulty in masticating and swallowing his food and in opening his eyes. When seen he could be aroused only with some difficulty. Questions put to him were at once comprehended and answered intelligently. His face was expressionless. He had paresis of both upper eyelids and of the face. He was unable to protrude his tongue and the difficulty of mastication appeared to depend chiefly on the inability to force the food out of his cheeks and into his pharynx. The salivation was evidently due to the same cause. No abnormality of the nervous system was detected by examination apart from an equivocal Babinski response. The temperature was 37.9° C. and the pulse-rate was 86. The third case began with slight headache, lasting for two days, followed by double vision and somnolence. The sleepiness gradually increased until at the time of examination there was great difficulty in awakening the patient. When this had been accomplished, he answered questions quite rationally, only to relapse into his former somnolent state. He appeared to experience great difficulty in opening his eyes. His temperature was 38.4° C. and his pulse-rate 90. He was admitted to the Melbourne Hospital two days later. He was then almost comatose. The cerebro-spinal fluid was found to contain an excess of lymphocytes and was under increased pressure. He died on the following day. There were distinct patches of broncho-pneumonic implication of the bases of both lungs, such as is seen in the lungs of persons who have died of influenza. There was active hyperæmia of the meninges, but no macroscopical hæmorrhages. A further investigation was being carried out.

The fourth case was that of a man, aged 52 years, who had complained of insomnia and was very restless 14 days before admission. These symptoms lasted for four days. He then complained of blurred vision and later of seeing objects double. Two days later, he became very drowsy and complained when aroused that he was unable to open his eyes. His wife stated that he could only open the eyes by pulling up the eyelids with his fingers. The medical practitioner in attendance found that his temperature was raised. When seen he appeared to be asleep. His temperature was 38.2° C., his pulse-rate 110 and his respirations 24. When aroused he showed evidence of double ptosis. His speech was difficult. He gave intelligent answers to questions, but relapsed immediately into sleep. There was nothing further of note in the results of the physical examination. The cerebro-spinal fluid was clear and not under increased pressure. There was no increase in the number of cells. During the following night he became rapidly worse and died in the morning of the next day. The fifth patient was a male, aged 48 years. The other members of his family had just recovered from influenza, when he became ill with what appeared to be the same disease. His temperature was slightly raised. He was well enough on the fifth day to sit up in the chair. On the following day he became drowsy and his temperature rose to 39.1° C.. The

drowsiness increased and when he was seen, it was marked. He was nevertheless very restless, his right arm and leg especially being moved in a purposeless and irregular manner. When roused, he replied to questions. He seemed to have difficulty in speaking. His speech was mumbling. There was inability to open the eyes well, but no strabismus was present, nor had he complained of double vision. Dr. Hiller remarked that this patient had been nearly blind in one eye for many years. There was no head retraction, stiffness of the neck nor pain on movement of the head. Kernig's sign was not present. There was a doubtful Babinski's phenomenon on the left side. In other respects the neurological examination did not reveal anything abnormal. The restlessness continued. As other drugs did not seem to have any effect, he was given morphine hypodermically. His condition was unaltered at the time of the meeting.

The sixth case was that of a boy, 12½ years of age. He had complained of inability to see clearly while at school. He stated that three days later he saw double. When trying to feed himself, he saw two spoons and did not know which one to bring to his mouth. He then became very talkative and at the same time drowsy. Restlessness developed. Six days after the onset of the illness he was seen at his home. He lay with his eyes closed, though at intervals he moved his arms and legs. He could be aroused and then answered questions intelligently. In fact he volunteered statements at times. He opened his eyes with difficulty and there was definite stabismus, due to paresis of the sixth nerve on the left side. There was relative dulness at the base of the left lung, associated with moist sounds of the fine type and some prolongation of expiration. His condition became much worse in the evening of the same day. His temperature, which had been 38.9° C., rose to 40.4° C, while his pulse-rate was 120 and his respirations 28. Lumbar puncture revealed a clear cerebro-spinal fluid under increased pressure. There was no increase in the number of cells. He died on the following morning.

Dr. Hiller pointed out that the chief features of all the cases were:—(i) the presence at some time of diplopia and (ii) of ptosis, usually of both eyelids; (iii) marked somnolence; (iv) fever.

Dr. R. J. Bull also contributed to the discussion.

MEDICO-POLITICAL.

A meeting of the South Australian Branch was held at the House of the Branch, Hindmarsh Square, Adelaide, on August 14, 1919. The President, Sir Joseph Verco, on taking the chair, announced that he had resigned his position of President and that the Council had appointed Dr. H. S. Newland, one of the Vice-Presidents, to the office. Sir Joseph Verco called upon Dr. Newland to occupy the chair.

Dr. H. S. Newland thanked the members for the honour they had conferred upon him in appointing him their President.

The business of the meeting was to consider the Venereal Diseases Bill, a copy of which had been sent in draft form to the Honorary Secretary of the Branch for the consideration of the Branch. It was announced that the Government proposed to introduce the Bill shortly.

A general discussion on the provisions of the Bill took place. The following motion was carried and it was decided to send the resolution to the Government:—

> That the South Australian Branch of the British Medical Association approves of the principles involved in the Bill, provided that no notification, either of disease or of cure of disease, be made without a bacteriological or sero-bacteriological examination having been first done.

It was pointed out that the Bill, as drafted, was modelled on the Acts in force in Victoria, Western Australia, Queensland and Tasmania. The five principles adopted at the Australasian Medical Congress (Sydney, 1911, and Auckland, 1914) were conformed with, *viz.*:—

(*i.*) Compulsory notification.
(*ii.*) Compulsory treatment.
(*iii.*) Treatment only by medical practitioners.
(*iv.*) Abolition of public advertisements for the cure of venereal diseases.
(*v.*) Establishment of hospitals for the treatment of venereal disease and of laboratories for chemical, bacteriological and other examinations and investigations, free of charge to the patient, to ascertain if he is suffering from or is cured and free from venereal disease.

A meeting of the Western Australian Branch was held at the Perth Public Hospital on July 23, 1919, Dr. F. A. Hadley, the President, in the chair.

Dr. W. P. Seed asked whether it was the opinion of the members that the Federal Committee of the British Medical Association in Australia should admit all medical practitioners to the congress and not members of the Association only, or whether the congress should be restricted to members. The matter was discussed and Dr. W. Thethowan moved and Dr. Seed seconded:—

> That, in the opinion of this meeting, Congress should be open to all members of the profession.

The motion was carried unanimously.

The undermentioned have been elected members of the Victorian Branch:—

H. Boyd Graham, Esq., M.B., Ch.B. (1915, Melb.), 42 Moonee Street, Ascot Vale.

H. C. A. Haynes, Esq., L.R.C.P. *et* S., Edin.; L.R.F.P.S., Glas., 1916; Alfred Hospital, Melbourne.

The undermentioned have been elected members of the New South Wales Branch:—

G. H. Bennett, Esq., M.R.C.S., Eng., 1887; L.S.A., Lond., 1884, c/o. Mrs. Miller, Public School, Windsor, New South Wales.

R. H. Bridge, Esq., M.B., Ch.M., 1912 (Univ. Sydney), "Beanbah," 235 Macquarie Street, Sydney.

Alan Davison, Esq., M.B., Ch.M., 1919 (Univ. Sydney), Royal North Shore Hospital, St. Leonards, Sydney.

C. J. Fallon, Esq., M.B., 1913 (Univ. Sydney), Avoca Street, Randwick.

H. J. Kenny, Esq., M.B., Ch.M., 1918 (Univ. Sydney), "Buxton," Belmore Road, Randwick.

O. E. J. Murphy, Esq., M.B., Ch.M., 1918 (Univ. Sydney), "Ellismere," Macgregor Street, Croydon.

E. H. White, Esq., M.B., Ch.M., 1918 (Univ. Sydney), 19 Park Road, Auburn.

G. S. Samuelson, Esq., M.B., Ch.M., 1888, M.D., 1893 (Univ. Edin.), of Ross Street, Bay Road, North Sydney, has been re-elected a member of the New South Wales Branch.

Robert Welton Hogg, Esq., M.B., B.S., 1915 (Univ. Melb.), of Morphett Vale, South Australia, has been elected a member of the South Australian Branch.

Francis Austin Burns, Esq., M.B., 1919 (Univ. Sydney), has been nominated for election as a member of the New South Wales Branch.

Naval and Military.

HONOURS.

The following additional list of Birthday Honours was announced in London on June 5, 1919:—

Commander of the Order of the British Empire (Military Division).

Colonel Reginald Jeffrey Millard, C.M.G..

Officer of the Order of the British Empire (Military Division).

Major Alexander Cook.
Lieutenant-Colonel Charles Edgar Dennis.
Major Norman Maxwell Gibson.
Major (Temporary Lieutenant-Colonel) Lewis Wibmer Jeffries, D.S.O..
Lieutenant-Colonel Glen Alburn William James Knight.
Major John Macdonald.
Lieutenant-Colonel Hugh Corbett Taylor-Young.

APPOINTMENTS.

The following notices of appointments, etc., have been published in the *Commonwealth of Australia Gazette*, No. 103, of August 21, 1919:—

Australian Imperial Force.

TERMINATION OF APPOINTMENT.

Second Military District.

Captain A. J. Corfe. Dated 10th August, 1919.

Third Military District.

Major W. A. Morton. Dated 2nd May, 1919.
Captain R. L. Forsyth. Dated 14th June, 1919.

Fourth Military District.

Lieutenant-Colonel T. G. Wilson. Dated 4th August, 1919.

Fifth Military District.

Captain A. Juett. Dated 8th August, 1919.

Australian Military Forces.

First Military District.

Australian Army Medical Corps Reserve—

The ages for retirement of the undermentioned officers to be extended until 31st December, 1919: Honorary Major J. Booth-Clarkson, Honorary Major H. C. Garde, Honorary Captain S. Stuart. Dated 31st July, 1919.

Second Military District.

Australian Army Medical Corps—

Captain (Honorary Major) J. C. Campbell, D.S.O., to be transferred to the Australian Army Medical Corps, Third Military District, with corps seniority next after Captain W. A. Hailes, D.S.O.. Dated 1st July, 1919.

The resignation of Captain C. B. Howse of his provisional appointment is accepted. Dated 30th June, 1919.

Australian Army Medical Corps Reserve—

Benjamin Thomas Edye to be Honarary Captain. Dated 5th July, 1919.

Honorary Captain T. B. Walley to relinquish the temporary rank of Major. Dated 22nd June, 1919.

Third Military District.

Australian Army Medical Corps Reserve—

Ernest Markson to be Honorary Captain. Dated 25th June, 1919.

William Begg, Athol Blaubaum and Warren Meade to be Honorary Captains. Dated 1st July, 1919.

Honorary Major (temporarily) I. Blaubaum, Reserve of Officers, to be Honorary Major. Dated 8th June, 1919.

The resignation of Honorary Captain A. S. Young of his commission is accepted. Dated 1st July, 1919.

Fifth Military District.

Australian Army Medical Corps Reserve—

Bruce Burnside to be Honorary Captain. Dated 8th July, 1919.

Sixth Military District.

Australian Army Medical Corps—

Referring to Executive Minute No. 20/1919, promulgated on page 30 of *Commonwealth of Australia Gazette*, No. 3, dated 9th January, 1919, the temporary rank and (part-time) pay of Lieutenant-Colonel granted to Major (Honorary Lieutenant-Colonel) H. N. Butler, D.S.O., is terminated. Dated 30th June, 1919.

TERMINATION OF GRANT OF TEMPORARY RANK.

First Military District.

Temporary Rank of Lieutenant-Colonel—

Captain L. G. A. MacDonnell, Australian Army Medical Corps. Dated 3rd May, 1919.

Second Military District.

Temporary Rank of Major—

Captain (provisionally) N. M. A. Alexander, Australian Army Medical Corps. Dated 13th November, 1918.

GRANT OF HONORARY RANK.

The undermentioned, who have served in the Australian Imperial Force as commissioned officers, having the rank held by them in the Australian Imperial Force confirmed as honorary rank in the Australian Military Forces, as follows:—

Officers who, on appointment for active service outside Australia, were serving, and are now serving, in the Australian Military Forces:—

Second Military District.

To be Honorary Lieutenant-Colonel—

Captain (Brevet-Major) A. L. Dawson, D.S.O., Australian Army Medical Corps. Dated 18th September, 1917.

Third Military District.

To be Honorary Lieutenant-Colonel—

Captain H. V. P. Conrick, D.S.O., Australian Army Medical Corps. Dated 1st May, 1918.

MEDICAL OFFICERS' RELIEF FUND (FEDERAL).

The Trustees acknowledge, with thanks, the receipt of the following donations and promises to the Medical Officers' Relief Fund:—

(SECOND LIST.)

New South Wales.

	£	s.	d.
Dr. Sinclair Gillies	100	0	0
Dr. F. M. Blackwood	52	10	0
Dr. Roland J. Pope	50	0	0
"Cipher"	50	0	0
Dr. M. O'Gorman Hughes	50	0	0
Dr. T. W. Lipscomb	50	0	0
Dr. F. A. Bennet (further donation)	42	0	0
Dr. C. B. Howse	30	0	0
Dr. C. T. B. Maisey	30	0	0
Dr. A. A. Palmer	30	0	0
Sir T. P. Anderson Stuart	25	0	0
Dr. A. A. King	25	0	0
Dr. C. H. E. Lawes	21	0	0
Dr. James Hughes	21	0	0
Dr. C. P. Jackson	20	0	0
M.B., Melb.	20	0	0
Dr. H. T. C. MacCulloch	20	0	0
Dr. W. H. Read	20	0	0
Dr. A. J. Gibson	20	0	0
Dr. H. M. Anderson	20	0	0
Dr. G. H. S. Lightoller	20	0	0
Dr. Margaret Harper	20	0	0
Dr. T. Sholto Douglas	10	0	0
Dr. H. B. Hetherington	10	0	0
Dr. R. Sproule	5	5	0
Dr. Joseph Callaghan	5	0	0
Dr. S. S. Merrifield	2	2	0

Victoria.

Dr. F. H. Cole	150	0	0
Dr. Herman Lawrence	100	0	0
Dr. A. J. Wood	100	0	0
Dr. E. H. Embley	50	0	0
Dr. J. Ramsay Webb	50	0	0
Dr. S. Connor	21	0	0
Dr. F. E. Langley	21	0	0
Dr. J. S. Ormond	20	0	0
Dr. T. W. Sinclair	20	0	0
Dr. T. C. Ker	10	10	0
Dr. D. Montgomerie Paton	10	0	0
Dr. Balcombe Quick	10	0	0
Dr. F. J. Pacey	5	5	0
Dr. H. Irving	5	0	0
Dr. J. Scott Paton	2	2	0
Dr. A. P. Drummond	1	1	0

Total received to August 26, 1919, £3,816.

RETURNED MEDICAL OFFICERS.

We have been asked by the Returned Medical Officers' Association of Victoria to request medical practitioners who

on return from active service are desirous of obtaining appointments as resident medical officers at any of the public hospitals, to write to the Honorary Secretary of The Returned Medical Officers' Association of Victoria, 25 Blyth Street, Brunswick.

Those returned medical practitioners who wish to attend the post-graduate course commencing on September 1, 1919, are requested to send their names to the Honorary Secretary of the same Association.

In the speech delivered by His Excellency the Governor of New South Wales on the opening on Parliament on August 19, 1919, the following paragraph deals with the public health:—

> The plans of my advisers in connexion with the public health of the State include the establishment of hospitals and rest-homes for maternity cases, better organization of the work of child welfare, the payment of compensation to persons who suffered losses as a result of the precautionary measures taken during the influenza pandemic and an organized campaign against the scourge of tuberculosis. You will be asked to confer such legislative authority as is necessary to give effect to these proposals.

We have been informed that Mr. A. C. Blacklow, who attained the rank of Lieutenant-Colonel in the Australian Imperial Force and was decorated with the Distinguished Service Order, has recently acquired the pharmaceutical businesses of the late Mr. J. C. Hallam in Sydney and has formed a company under the name of Hallam, Limited. Mr. Blacklow is the Governing Director, while the Directors are Mr. A. J. Henderson, Dr. R. Martin and Mr. W. Archer. These gentlemen were the pharmacists in charge of the three establishments. The head office is situated at the corner of George and Hunter Streets and the branch offices are at 70 Hunter Street and 6 Oxford Street, Sydney. Messrs. Hawley & Hawley, of Pitt Street, Sydney, are the auditors of the company.

Correspondence.

NATIONALIZATION OF MEDICINE.

Sir,—In your issue of August 9, 1919, there is a summary of a discussion of the Federal Committee of the B.M.A. relative to extension of the public health service.

There is also a leading article on "The Prevention of Diseases." Many, including myself, would submit that both the Federal Committee and the writer of your leader miss the principal points in the problem.

Both seem to me to assume the possibility of patching and improving the present system.

I would contend that this is not desirable nor possible, that is, if the best possible results are required and that the data of modern science are sufficient to evolve an entirely new structure which would give far more perfect results.

Running through both the report and the leader is the same evident horror of nationalization.

Was Professor Benjamin Moore correct when as President of the Section of Physiology of the B.A.A.S., 1914, he said?

> The very profession which ought to be urging forward the new era, apparently stands in dread of it and seems to prefer to reap its harvest from disease rather than to seize the noble heritage won for it by the research of pioneers and so stand forth to the world as the ministry of health.

To quote the same author: "Disease is no longer an affair of the medical profession, it is a national concern of vital importance."

Surely no one will deny this last statement; both leader and Committee seem agreed this far, if the present writer reads them aright.

"As each harvest of fuller knowledge is gathered, it becomes more and more essential that it should be put to good use," so runs the leader. "Extension of the public health service is not only desirable, but urgently required," so says the Committee.

Both, however, want to retain essentially the old system. "Free medical attendance for the masses is a bogie and economically unsound," you say.

Is also free education?

Is it logical to supply communally education to "the masses" and not to see communally that the same "masses" are able to be safely born and reared? What is the good of bothering to educate many of the crippled minds produced by the slipshod health "system" of to-day?

What is the present condition of affairs?

Individual and national health is served by two governments working through about five departments, these inefficiently empowered and staffed; by a make-believe "voluntary" hospital system, by charitable organizations and by private enterprise as exemplified in the lodge system and by private practitioners.

This is the way we fight our oldest and deadliest foe, disease. How would those who shudder at the dread word nationalization, have felt a few years back if a similar "system" had controlled our Navy and Army? Nationalization seems pretty efficient there.

What are the arguments against some form of national control of the nation's best asset, its health?

"Economically unsound"; that is a hard argument to debate, as are most vague generalizations, but surely the idea of giving free health to the "masses" has something to recommend it. It may be called pauperization (lovely Tory word), but the vision of the "masses" kept as well as science can, cleanly born, efficiently reared to clean, sane manhood by the State for the State sticks in one's mind, as something so big that one does not dread the "pauperization."

You speak of the "mistaken proposal" of "everything for nothing." State service is not free giving. Someone pays. There is no inherent reason why the payment should not be justly distributed and there is little doubt that an efficient national machine will be worth the money not merely to the "masses," but to every class of the nation.

One is not so much making a free gift to the "masses," but, by seeing that they are kept healthy, insuring the nation. State service is going to increase the cost—may be—but it is going to be worth the cost.

If by a complete system we can, as a nation, unitedly put our back into research, prevention and thorough and early treatment, it is going to pay us to spend millions.

Can any one conscientiously say that this can be done with the present scheme with its pathetic lodges getting their twopence worth of advice from a brain-fagged, even if frequently honest intentioned practitioner, with its army of once highly educated men rushing eternally, many of whom have neither time nor leisure to even read this journal, degenerating from scientists to pedlars. Even if we leave out of count our weird inco-ordinated hospitals posing as independent and virtually State-supporteed (if not as they should be State controlled), benevolent and religious bodies, what a chaos!

"Initiative in many instances would be stifled." Why?

Where does one find more initiative than in the splendid record of achievement as expressed in the published scientific work of State servants, university teachers, salaried officers of military and naval services, or paid officers of other institutions, who correspond to the officers of a national service? Honestly do we, can we expect the private practitioner stimulated by such competition as it is (a competition that calls often for smart cars, rapid action and bedside manner, rather than careful scientific efficiency) to really give his best?

How many have lately boasted of number of calls per day, how few have given to the world their careful observations on the clinical aspects of the recent plague?

One does not blame the hurrying G.P.'s; one blames the system that makes the need for his feverish hurry.

Would not these same men, many of them, achieve something better if they were able to attend to a definitely estimated number of persons as the salaried officers of the State.

You speak of bringing the profession "to a position of subserviency."

Why should the State servant feel thus? There is no reason apparent to me why each and every member of the State machine should not be able to find pride in his work, especially as the feeling that each case seen would be seen

for its own sake and would not represent another 10s. 6d.. Can there be any greater feeling of subserviency than that which wells up in some minds when a *malade imaginaire* says: "And the fee, doctor"?

I do not expect you or many to express open agreement to my views (policy forbids!), but I am in good company in my faith. It is this, that sooner than we expect, the State will control health and that a wide-spread net of trained medical effort will from birth onwards take the responsibility for the maintenance of the individual and thus of the national health; that no one will have to do without advice and help of the best type; that, in fact, the State will not allow anyone to be needlessly unhealthy for its own sake; that health will be as much a necessary commodity as fresh air and water and as unalienable a right as police or military protection, education, street lighting, and so forth. The medical profession has done splendid, disinterested things in the past. Let us look now at the matter from the communal viewpoint and heed that it may not be said that we stood in the way of progress.

One last word: let us cease to boast about the free service we give to hospitals. Who would deny that those hospital appointments are eagerly sought and are to the fortunate holder, a most valuable financial asset, if only as advertisement? I have often wondered what would be the actual cash profit to the hospitals, if these appointments were auctioned on their behalf. There would be a pretty undignified scramble, anyhow.

Yours, etc.,

BURTON BRADLEY.

"Nedra," Little Street, Longueville, New South Wales,
August 9, 1919.

SCORBUTUS OUTBREAK IN IDIOT COTTAGES.

Sir,—Dr. Lind's report as to his successful treatment of scorbutus cases is of much interest. Formerly I have had similar outbreaks amongst the childen (mentally deficient) in the Institution of which I am Medical Officer.

With varying success I tried boiled milk, fresh milk, beef-juice, lemon-juice and tonics. The cases continued to crop up as usual and some went from bad to worse.

Two years ago I directed that all drinking vessels, spoons, and forks should be boiled directly after each meal. Since then I have not had a case.

Evidently the infection started invariably in the gums and was conveyed from one child to another by means of unsterilized eating utensils. I found that this method of dealing with the trouble was the most direct.

Yours, etc.,

R. U. RUSSELL,

Medical Superintendent, Mental Hospital,
Newcastle.
August 11, 1919.

Obituary.

ADOLPHE OSWALD BOER.

It is with great regret that we have to record the death of Dr. Adolphe Oswald Boer, of Streaky Bay, South Australia, which took place on August 5, 1919. He contracted influenza, which was epidemic in the district, while he was "run down" with overwork. The illness became complicated by pneumonia, pleurisy and empyema, necessitating incision and drainage. He was attended by his colleagues from Elliston and Denial Bay, but the fatal issue could not be averted.

Adolphe Oswald Boer was the second son of Mr. A. E. Boer, of Stockwell, South Australia. He was born in 1889. He was a hard-working and successful pupil at the Prince Alfred College, and in 1907 he entered the University of Adelaide for the purpose of studying medicine. He graduated M.B., B.S., in 1911. He served as Resident Medical Officer at the Adelaide Hospital during the year 1912 and acquitted himself with credit. In 1913 he settled in private practice at Streaky Bay and was there married to Miss Miller. In 1916 he undertook to act as *locum tenens* in Adelaide for Dr. E. V. R. Fooks while he was abroad on active military service. After a year he returned to Streaky Bay, where his services were urgently requisitioned. He remained at his post from that time until his death. He was full of energy and ever-ready to exert himself for the benefit of his patients. Great sympathy is felt with his widow and his son in their bereavement.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

The undermentioned have been registered under the provisions of the *Medical Act, 1912 and 1915*, as duly qualified medical practitioners:—

Barrack, Bruce Boyle, M.B., 1918, Univ. Sydney.
Barbour, Eric Petty, M.B., 1915, Univ. Sydney.
Nott, Lewis Windermere, Lic. R. Coll. Phys., Edin., 1918; Lic. R. Coll Surg., Edin., 1918; Lic. R. Fac. Phys. Surg., Glasg., 1918.
Southwood, Albert Ray, M.B., Bac. Surg., 1916, Univ. Adelaide.
Bennett, George Herbert, L.S.A., Lond., 1884; M.R.C.S., Eng., 1887.

The following additional registrations have been made:—
Edwards, Rowland Campbell, Mast. Surg., 1919, Univ. Sydney.
Ellis, Oswald Jacob, Mast. Surg., 1919, Univ. Sydney.
Kay, William Elphinstone, Mast. Surg., 1914, Univ. Sydney.
Langan, Alfred Meillon, Mast. Surg., 1919, Univ. Sydney.
Oakeley, William Graham, Mast. Surg., 1919, Univ. Sydney.
O'Riordan, Sydney Michael, Mast. Surg., 1919, Univ. Sydney.
Whishaw, Ralph, Mast. Surg., 1919, Univ. Sydney.
Bridge, Reginald Harold, F.R.C.S., Eng., 1915.

The following names have been restored to the Register:
Perceval, Montague William, Lic. Mem. Lic. Mid., 1877; K.Q. Coll. Phys., Irel.
Yeates, Edward, Lic. and Lic. Mid., K. & Q. Coll. Phys., Ireland, 1886; Lic. R. Coll. Surg., Irel., 1886; Fell. R. Coll. Surg., Irel., 1893.

VICTORIA.

The undermentioned have been registered, under the provisions of Part I. of the *Medical Act, 1915*, as duly qualified medical practitioners:—

Broinowski, Gracius Herbert, M.B., Sydney, 1897, 156 Toorak Road, South Yarra.
Hickford, Julie Mary, M.B. *et* Ch.B., Melb., 1918, Natimuk.
MacKenzie, Ewen, L.R.C.P. *et* S., Edin; L.F.P.S., Glas., 1909, Bunyip.
Fleming, James Hamilton, L.R.C.P. *et* S., Edin; L.F.P.S., Glas., 1899; Harrow.

The undermentioned names of deceased practitioners have been removed from the Register:—
Richard Horace Gibbs.
Sampson John Rodger Greville.
Edmund Digges La Touche.

QUEENSLAND.

The undermentioned have been registered under the provisions of *The Medical Act of 1867* as duly qualified medical practitioners:—

Greer, William Wells, Southport, M.B., Ch.B., 1904, M.D., 1906, Univ. Edin., F.R.C.S., Edin., 1914.
Hewer, George Frederick, Ipswich, M.B., Ch.M., Univ. Syd., 1919.
McClelland, Hugh Sylvester, Maryborough, M.B., Ch.M., Univ. Syd., 1913.
McClelland, Isabella, Maryborough, M.B., Ch.M., Univ. Syd., 1918.
O'Sullivan, Joseph Ernest, Wondai, M.B., Ch.B., N.U., Irel., 1913.

Talbot, Norman Charles, Rockhampton, M.B., Ch.B., Univ. Melb., 1912.
Voss, Paul Ernest, Rockhampton, M.B., Ch.M., Univ. Syd., 1915.
Voss (née Exton), Harriette Martha, Rockhampton, M.B., Ch.M., Univ. Syd., 1915.

Books Received.

ON LONGEVITY AND MEANS FOR THE PROLONGATION OF LIFE. Founded on a lecture delivered before the Royal College of Physicians on December 3, 1903, by Sir Hermann Weber, M.D., F.R.C.P., edited by F. Parkes Weber, M.D., F.R.C.P., with a Preface by Sir Clifford Allbutt, K.C.B., F.R.S.; Fifth Edition, revised and partly rewritten; 1919. London: Macmillan & Co., Limited; Demy 8vo., pp. 292. Price, 12s. net.

THE MEDICAL ANNUAL, 1919: A YEAR BOOK OF TREATMENT AND PRACTITIONER'S INDEX; Thirty-seventh Year; 1919. Bristol: John Wright & Sons, Limited; London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.; Demy 8vo., pp. 675. Price, £1 0s. 6d. net; postage, 1s. extra.

DENTAL SURGERY AND PATHOLOGY, by J. F. Colyer, F.C.S., L.D.S.; Fourth Edition, 1919. London: Longmans, Green & Co.; Demy 8vo., pp. 899, illustrated by 920 figures. Price, 32s. net.

AIDS TO OPHTHALMOLOGY, by N. Bishop Harman, M.A., M.B., F.R.C.S.; Sixth Edition; 1919. London: Baillière, Tindall & Cox; Foolscap 8vo., pp. 226, with 112 figures in the text. Price, 3s. 6d. net.

ON GUNSHOT INJURIES TO THE BLOOD-VESSELS, by George Henry Makins, G.C.M.G., C.B., President of the Royal College of Surgeons of England; 1919. London: John Wright & Sons, Limited; Royal 8vo., pp. 251, with illustrations. Price, 21s. net.

VICIOUS CIRCLES IN DISEASE, by Jamieson B. Hurry, M.A., M.D.; Third and Enlarged Edition; 1919. London: J. & A. Churchill; Demy 8vo., pp. 377, illustrated. Price, 15s. net.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xvii..

University of Adelaide: Professor of Pathology.
Mental Hospital, Parkside, South Australia: Deputy Medical Superintendent.
Jundah Hospital, Queensland: Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital.
TASMANIA. (Hon. Sec., Macquarie Street, Hobart.)	Medical Officers in all State-aided Hospitals in Tasmania.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society..
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

Sept. 2.—Tas. Branch, B.M.A., Branch and Council.
Sept. 3.—Vic. Branch, B.M.A..
Sept. 9.—N.S.W. Branch, B.M.A., Ethics Committee.
Sept. 11.—Vic. Branch, B.M.A., Council.
Sept. 11.—N.S.W. Branch, B.M.A., last day for Nomination of Candidates for Election to the Federal Committee.
Sept. 12.—N.S.W. Branch, B.M.A., Clinical.
Sept. 12.—S. Aust. Branch, B.M.A., Council.
Sept. 12.—Q. Branch, B.M.A., Council.
Sept. 16.—Tas. Branch, B.M.A., Branch and Council.
Sept. 16.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Sept. 17.—W. Aust. Branch, B.M.A., Branch and Council.
Sept. 23.—N.S.W. Branch, Medical Politics Committee; Organization and Science Committee.
Sept. 24.—Vic. Branch, B.M.A., Council.
Sept. 25.—S. Aust. Branch, B.M.A..
Sept. 26—N.S.W. Branch, B.M.A., Election of Two Members to Federal Committee.
Sept. 26.—Q. Branch, B.M.A., Council.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney.